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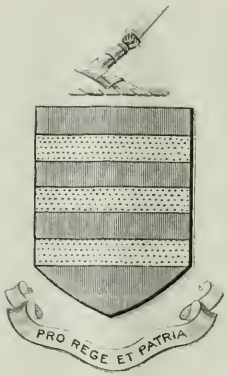

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THE MODERN HOSPITAL

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A REVIEW OF THE WORK OF THE AMERICAN CONFERENCE ON HOSPITAL SERVICE IN 1921

By FRANK BILLINGS, M.D., President, American Conference on Hospital Service, Chicago, Ill.

THE organization of the American Conference on Hospital Service was due to the opinion of many men and women, who are members of the various national organizations engaged in the work of hospital betterment, that an additional corporation was needed to act as a clearing house in the program of hospital standardization. I believe that the judgment of its founders is justified fully by the activities of the Conference in 1921. In this connection, too, it must be borne in mind that its organization was not fully completed with the full complement of officers until July, 1920.

In the first complete calendar year of its existence the American Conference on Hospital Service feels it has justified its foundation. Action was taken by the board of trustees on March 2 through a resolution to assure constituent members against hasty action on the part of the Conference that might seem to trespass on their respective provinces. The Hospital Conference had part in two annual conventions, the Congress on Medical Education, Licensure, Public Health and Hospitals at Chicago in March, and the American Hospital Association convention at West Baden in September. The development of the Hospital Library and Service Bureau has been far beyond expectations.

In October, 1920, at Montreal, Canada, the Conference adopted two important objectives which have been the fundamental basis of its chief activities. The objectives are:

1. To promote coordination of all the agencies engaged in hospital betterment and to encourage cooperation in the various programs of the respective constituent members of the Conference to the end that efficiency, economy and avoidance of duplication of work may be secured.

2. To maintain and develop the Hospital Library and Service Bureau at the headquarters of the Conference in Chicago.

In accordance with these adopted fundamental policies, at the annual meeting of the Conference held in Chicago on March 8, 1921, the following cooperative scheme was unanimously adopted:

1. Hospital standardization.

(a) Endorsement of the standards of the American College of Surgeons.

(b) Negotiations for the transfer of field work of the College of Surgeons to the Hospital Conference if at any time the College desires to transfer the work.

(c) Formulation of additional standards applicable, respectively, to follow-up work, statistical reports of clinical work, accounting, nursing and the like.

2. Training of hospital executives.

(a) Cooperation with the work of the committee named by the Rockefeller Foundation.

3. Development of higher medical standards and more efficient community medical service through postgraduate teaching.

(a) To support the further development of intern standards of the American Medical Association.

(b) To promote the fifth or intern year as the prerequisite for independent practice.

(c) To encourage systematic teaching of graduates at hospital centers.

(d) To promote plans for the establishment of closer relations between practitioners and well equipped diagnostic centers at hospitals and dispensaries.

The activities of the Conference during 1921 have been in accordance with its adopted principles and policies. Its constituent members and the public have definitely learned that the Conference is of great value in the establishment of coordination and cooperation in the program of hospital betterment and that it has not and will not embarrass any member in carrying out its own program but will aid in so far as may be done.

Rights of Members Protected

To give further assurance that the principles and policies of the Conference will be those adopted by a majority, at least, of the members, the board of trustees at its meeting held on March 9, 1921, adopted the following preamble and resolutions:

"Inasmuch as the Conference has adopted a broad program of general policies, and in order that the constituent members may be assured against hasty or ill considered action, which might seem to trespass upon the province of any constituent member;

Resolved, that the president appoint a special committee to formulate the procedure by which the Conference shall determine upon, adopt and advocate specific policies, standards or approved methods in hospital service, to report to the trustees and the report will be placed by the trustees before the next meeting of the Conference, together with such amendments and other comments as may in their judgment seem wise; and be it further

"*Resolved*, that this procedure shall give all reasonable protection to the constituent members of the Conference against hasty action or that of doubtful propriety in any field in which a member is actively or inherently interested without the active participation of such members in the discussion, or without every opportunity being given such member to be heard fully on the question, and this procedure shall also forbid the publication of any adopted policy, standard or approved method unless accompanied by the minority report or substitute, presented by a member actively or inherently interested in the question, if such a minority report or substitute is presented by such a member."

During the year the Conference has held two public meetings; one the annual meeting on March 9, at the Congress Hotel, Chicago, as a part of the annual Congress on Medical Education, Licensure, Public Health and Hospitals, and the other a mid-year meeting with the American Hospital Association on September 12-16 at West Baden, Ind.

At the annual meeting the Conference was given jurisdiction over that part of the program of the Congress which dealt with hospitals. Furthermore, the constituent members of the Congress agreed that at all its future annual meetings the Conference should prepare the program and conduct the exercises relating to the subject of hospitals. It must be seen that the assignment of this function orients the Conference in the minds of medical educators, boards of state licensure, officers of public health and of all organizations and individuals interested in hospital betterment. It gives the Conference an important and influential status.

At the annual meeting the program on hospitals prepared by the officers of the Conference attracted a large audience. Dr. W. H. Smith, medical director of Johns Hopkins Hospital, delivered an address characterized by its broad-minded point of view upon "Adequate Medical Service for a Community"; Lulu G. Graves, at that time professor of home economics at Cornell University, presented a paper upon the important subject of "Dietotherapy"; Donelda R. Hamlin, director of the Hospital Library and Service Bureau, made a report which included a statement of the organization of the library by the Conference to become the central depository wherein information is so arranged and tabulated as to be made available for the use of those engaged in building, equipping and operating hospitals, sanatoriums, dispensaries, health centers and allied institutions. These papers aroused an interesting discussion which was participated in by Dr. George E. Vincent, Dr. Ray Lyman Wilbur, Rev. Charles B. Moulinier, Dr. Arthur Dean Bevan, Dr. F. E. Sampson, Miss Ida M. Cannon, and others. Approval of the policies of the Conference was a general expression of those who participated in the discussion.

At the meeting at West Baden, one-half day was devoted to a joint meeting of the American Hospital Association and the Conference under the jurisdiction of the Conference. Dr. Franklin H. Martin, secretary-general of the American College of Surgeons, spoke on "The Past, Present and Future Work of the College." Dr. Franklin R. Nuzum, medical director of the Santa Barbara Cottage Hospital, presented an interesting paper embodying constructive ideas upon "A Method for Increasing Medical Efficiency Within the Hospital." These papers aroused an animated discussion.

During the year the Hospital Library and

Service Bureau has developed in the selection of material and in giving service to the public far beyond the sanguine expectations of its founders. The reader is referred to reports of the development of the library and a description of some of its activities which have been published during the year. See THE MODERN HOSPITAL, 1921, XVI, 36-37 (Outline of Library); 1921, XVII, 332-333 (Report of First Year's Work of Library). Its phenomenal development and the recognition of its value by the public, evidenced by the requests for service, are due to the splendid management and industry of the director, Miss Donelda R. Hamlin, and her able assistants.

This short general statement does not indicate adequately the full activities of the Conference during the year. I hope the statement is sufficiently definite to enable the public to estimate the value of the Conference in the broad field of hospital betterment. I think that the founders of the Conference and all individuals who are interested in its work may feel a sense of pride in its accomplishments within so short a period of time since it was organized.

HOSPITAL DEVELOPMENT IN THE ORIENT

By EDWIN R. EMBREE, Secretary, The Rockefeller Foundation, New York

A YALE graduate, who was very proud of his large family, returning to his class reunion last June, accosted a classmate and asked about the latter's progeny.

"I have three children," the classmate replied.

"Oh," said the first, "that's no family. Hurry up, old man, get some children!"

"No," said the other, "I shall not have any more children. I am afraid to!"

"Afraid? What can you be afraid of? If you have three children why do you fear to have more?"

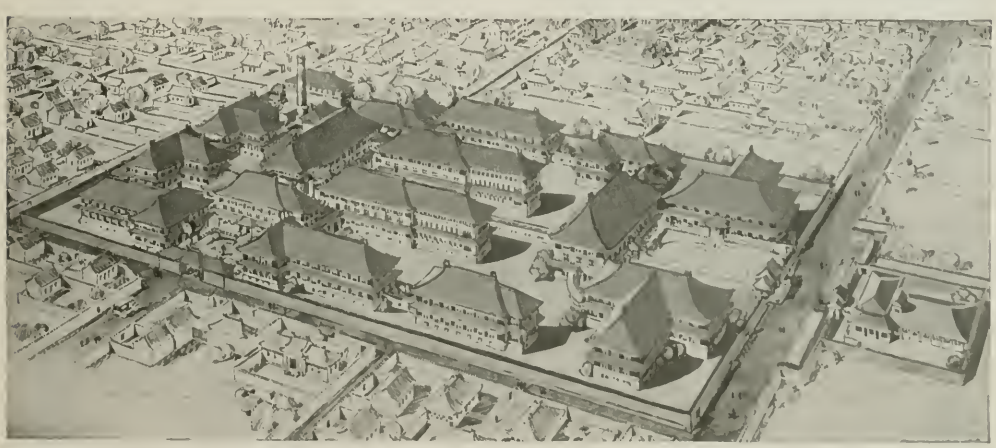
"Well," said the classmate, "that's it, I'm just afraid. I have been studying statistics of population, and I've decided I can't risk having more than three, because the best statistics I can find say that every fourth child born in this world is a Chinaman!"

The first impression of life in the Orient is of overwhelming numbers of people. Not only do the estimates that every fourth child born is Chinese seem justified, but, as one adds the millions in Japan, in Java, and in India, the tremendous excess of life in the East becomes almost overwhelming.

The second impression is of the omnipresence of disease and suffering, of general disregard for health, often for life itself. So many millions of lives are brought into the world with so little thought, that correspondingly little attention is paid to human life, its preservation, or its snuffing out.

Suffering from Lack of Medical Care

If anyone doubts the value of medicine and its application to the health of a people he should visit such a country as China and see the appalling results of the lack of scientific attention to



A bird's eye view of the Peking Union Medical College and Hospital. The hospital buildings (medical and surgical wards, outpatient building, private patient pavilion and nurses' home) are at the left, and center. The three laboratory buildings are grouped about the quadrangle at the right and center. At extreme right, opposite main gate, stands the auditorium.

public health. Smallpox patients, with disease in active state, are about the streets; typhoid fever, which is being eliminated in the West by sanitation of water and milk supplies, is rampant; blindness, trachoma and other diseases of the eye are everywhere in evidence on the city streets; the infant mortality is shocking; anemia, resulting from hookworm and other intestinal parasites, seems to be well nigh universal. No one who has not seen the disease, suffering and death among a people who neglect public health can realize the tremendous advance that has been made in America and Europe through diligent, painstaking and scientific efforts towards disease control.

After one has recovered somewhat from his amazement and his depression in the presence of such great numbers of human beings with such widespread prevalence of disease and suffering, he begins to recognize here and there throughout the countries of the Orient the beginnings of sanitation and of medical care—the stirrings, feeble in some countries, vigorous and active in others, of awakening regard for science and for its application to the preservation of human life.

China and Japan present striking contrasts in medical development, as they do in many other respects. As these two nations may be regarded as representing the extremes in medical science and hospital care throughout the East, a brief resume of past and present conditions in these countries may illustrate tendencies and accomplishments in other oriental areas.

Japan's Brilliant Advance in Medicine

The progress of the Japanese in medical science is one of the remarkable aspects of their rapid acquisition of Western civilization. Thorough students of the excellent German medical institutions of the last generation, well equipped Japanese scientists returned to their native country and there put into effect with striking rapidity and with devotion to their European models the Western systems of medical education and scientific research. For fifty years Japan has been advancing in medical science in a manner not uncomparable to that of the countries of the Occident. Today the imperial universities and the special institutions of research, such as the Kitasata Institute, are a credit to Japan as they would be to any country.

The development of medical science in Japan, as is too often true in Western countries, is far ahead of its practical application to the daily life of the people. Japanese scientists are adding their full quota to the present movement to extend medical knowledge, to discover the means of controlling disease. There is a larger gap between medical knowledge and medical practice in Japan than there is in Europe and America. The Japanese have carried over directly from the German system the devotion to the scientific "arbeit." To work on a piece of research they sometimes sacrifice both teaching of students and care of patients. Furthermore, modern medicine has been recently introduced there and it is difficult to transform in a short space of time the habits of a whole nation. Attacks on the legions of internal parasites have not yet been made on a sufficiently comprehensive scale; a larger number of the great infectious diseases remain out of control than one would expect from Japan's present medical knowledge; hospital care and hospital management still lag behind the standards of medicine as a science.

The comparatively unattractive appearance of hospitals in Japan is accounted for in large part by the lack of proper nurse training and nursing care. This is true of native hospitals in general throughout the Orient. It is true for that matter of hospitals almost everywhere outside the Anglo-Saxon countries. The next great step forward in

The Central Hospital, Peking, erected and managed by Chinese initiative and with Chinese funds and staffed with Chinese personnel, represents the most encouraging evidence of the application of scientific medicine and of modern methods by the Chinese themselves.

Staff and students of the Peking Union Medical College. Sixteen buildings comprising modern laboratories and hospital wards, erected in classic Chinese architecture, form the institution proper. The college has been erected and is maintained by the Rockefeller Foundation.

From left to right the groups in the picture are: Nurses (on steps and in foreground), administrative staff, faculty (in center), hospital interns; to right, on steps, students; in background, laboratory assistants, hospital attendants, service workers, janitors, cleaners, cooks, laundry-men, gate-keepers, guards, and servants.

Picture taken in the forecourt of the hospital, showing out-patient department in center, nurses' home on the left and the administration building on the right.

hospital care in Continental Europe as well as in the countries of the Far East must be in the training of nurses, in recruiting from higher social and intellectual classes, in the development of standards, and in the extension of nursing service.

Popularity of Hospitals in Japan

While Japanese hospitals seem to an American to leave much to be desired, these institutions are remarkably popular with people of all classes. The Japanese turn at once to the hospitals when confronted with sickness which seems serious. This is partly due to lack of facilities for caring for the sick in the average Japanese home. However, the universal willingness and eagerness to enter a hospital in case of severe illness can be accounted for only on the ground that these institutions have during the past two generations gained and justified the confidence of the people to a degree equalled in few other countries.

The progress of medical science and the popularity of institutional care have combined to produce a rapid growth of hospitals in this island kingdom. Fifty years ago these were simply the scattered beginnings of medical institutions. Today there are well over 3,000 well established hospitals to aid the 45,000 physicians in caring for Japan's total population of 56,000,000. The service of the Japanese hospitals is greatly extended because of the immense size of the out-patient services. The Central Sanitary Bureau reported in 1917 that the seventy-six public or governmental hospitals with a total bed capacity of 7,764 during the year 1917 cared for 73,283 in-patients and during the same period treated 638,831 out-patients.

Hospital care in Japan while not yet abreast of that nation's brilliant achievements in medical research is nevertheless in a healthy and vigorous state. Its development will probably closely follow that of the most progressive countries of the West.

Slow Progress of Medicine in China

Conditions medically in China present a different picture. Here modern medicine remains for the most part a foreign and a feeble growth. While the promise for the future is encouraging, present conditions so far as Chinese science and

Main building of the University of Hongkong, in connection with which is being built up under British auspices one of the most promising medical schools and hospitals in Asia.

Chinese leadership are concerned are in sharp contrast to the great progress in the adjoining empire.

The introduction of medicine to China is a fascinating story, full of adventure and full of the best tradition of scientific and humane endeavor. It represents one of the finest aspects of the relations of the West to the East.

Early Traders as Hospital Builders

The earliest infiltration of western medicine came through the physicians attached to trading companies and through medical missionaries. In the year 1805 Dr. Alexander Pearson, surgeon to the East India Company, introduced vaccination into China; in 1820 Robert Morrison and Dr. Livingston of the same company opened temporarily in Canton a dispensary, dealing chiefly in Chinese drugs; and in 1827 Dr. Thomas Richardson Colledge at the Port of Macao founded the Macao Ophthalmic Hospital, the first permanent institution in China for the purpose of bringing the benefits of western medicine to the suffering Chinese.

Peter Parker, a Yale graduate and representative of the vigorous Yale Mission Board of those days, the first medical missionary ever appointed as such by any mission board, began in 1834 the great work under missionary auspices which for three-quarters of a century gave to China most of its medical service.

The medical missionaries began from the first to develop hospital facilities. With small resources and with scant equipment they renovated houses, put in beds, accepted patients and gave such medical and nursing care as they and their families could offer. Catholics and Protestants alike have fostered this scientific and humanitarian work. At present between two and three hundred mission hospitals are scattered throughout practically every province of the immense country. The doctors and hospitals, grown up about the western legations and consulates in the larger Chinese cities, have also had an influence. Not only have these institutions given medical relief to individual patients; they have also served as centers from which have radiated knowledge of modern medicine and the beginnings of appreciation of public health.

However devoted and effective the medical work of the trading companies and missionaries, it is clear, of course, that no thorough and lasting progress in medical science or hospital care can be made in so great a country as China except through the direction and leadership of the Chinese themselves. The encouraging signs of present times are the development of important medical schools in China for the training of Chinese physicians, nurses, and public health leaders, and the development of Chinese initiative as illustrated in a few hospitals now being erected and managed entirely by Chinese. The Hunan-Yale School at Changsha in Central China, the former Harvard Medical School in Shanghai, the medical department of Shantung Christian University at Tsinan, all have been giving creditable medical training to Chinese physicians for more than a decade.

The New Peking Medical College

The latest addition to the forces of medical education and hospitalization in China is the

The arrangement, light and ventilation in the Central Hospital, Peking, erected and directed entirely by Chinese, are beyond criticism. The medical and nursing is of high standard.

Peking Union Medical College. This institution, founded on the basis of an earlier school conducted under a union of American and British missionary societies, has been taken over by a group of trustees representing jointly these original societies and the Rockefeller Foundation. An entirely new institution including modern laboratories and hospital buildings has been erected and is being maintained by funds from the China Medical Board of the Foundation.

The Peking Union Medical College was formally dedicated to its service to medicine in China in the autumn of 1921. At the time of the dedication there were held in Peking meetings of the trustees of the college and an international medical congress including representative men of science and educational leaders from France, the British Isles, America, Canada, Japan, Java, the Philippines, Korea, and practically every province of China.

The new college has been in course of construction since 1917. Sixteen buildings, with sweeping green tile roofs and great overhanging eaves, house the laboratories, hospital wards, and auxiliary structures of the institution proper. Adjoining are the buildings of the pre-medical school which gives three years of intensive training in the chemical, physical, and biological sciences preparatory to medicine. Nearby in the Tartar City are groups of modern brick houses, the residences of the members of the faculty and their families. The institution has been erected in architecture characteristic of the best in Chinese classic and sacred building. It is maintained in accordance with high standards of western science.

The hospital of the new college has been erected and equipped in accordance with modern standards. Careful attention has been given to ventilation, light, convenience and effectiveness of nursing, of diet kitchen and of clinical care. Modern scientific equipment such as x-ray, electrocardiograph, hydrotherapy, and facilities for laundry and other services has been installed. A course in nursing with a carefully planned curriculum of theoretical and practical training comprises one of the recognized educational departments of the institution.

Japanese Hospital at Mikden

An old mission hospital at Anking, Central China.

It has been recognized that no one institution would be able to train the great body of medical practitioners needed by the Chinese. The purpose, therefore, in establishing this college has been to set standards, to train leaders, to demonstrate what an adequate medical college and hospital in China might represent. Thus, by a single institution, it is hoped to influence an entire nation. It is because of this purpose that so great significance was attached to the attendance at the dedication this autumn of the large body of medical men from all parts of China and to their expressed desire to share in the opportunities for cooperation and for advanced study.

The budgets provided for the college and hospital for the years of the immediate future, while slightly below those of similar well-established institutions of high standing in the United States, are so much above those of the other colleges and hospitals in the Chinese Republic as to make this institution unique in all China and, in some aspects, unique in the entire Far East. This places upon the faculty a responsibility for leadership in teaching, in hospital management, in nurse training, and in the advancement of medical science and public health, to which they are alive. Few medical schools, few faculties have ever had before them the opportunities or the challenge to high endeavor which now confront the Peking Union Medical College.

Finally, and most encouraging of all, the Chinese, through their own leaders and their own trained personnel, are beginning to organize and to man their own hospitals and to make begin-

A modern dental college and clinic, Tokyo, Japan.

nings in the establishment of their own medical schools.

The Central Hospital in Peking is a most encouraging example of the present stage of development. The Central Hospital was erected by Chinese funds as a result of Chinese initiative: it is maintained by a Chinese board of trustees and supported by contributions from the Chinese. It is a striking instance of the fulfillment of Chinese promise in medical science and medical service. To such men as Dr. S. P. Chen, the director of this hospital, Dr. Fu Chen Yen, dean of the medical school at Changsha, and a small group of men comparable to these, is now being handed the torch of medical and hospital leadership in China.

Main building of the Kitasato Institute for Infectious Diseases, Tokyo.

The developments in medicine and in hospitalization in the other countries of the East lie somewhere between the extremes of China and Japan.

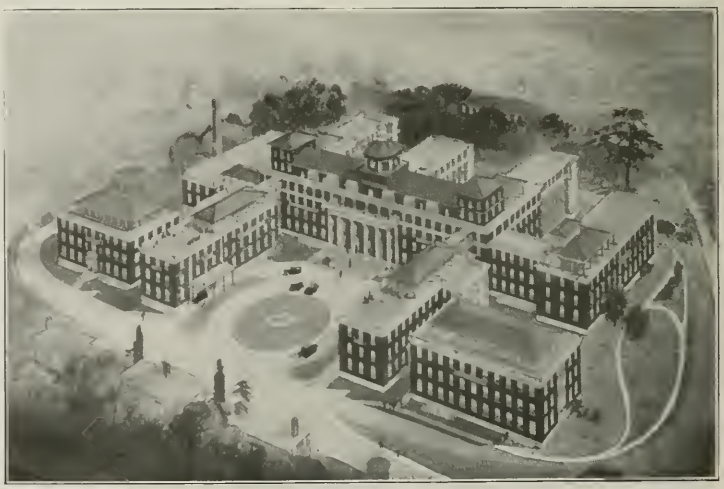
India, in many ways as backward medically as any country in the world, has had the benefit of the supervision of the British colonial system of medicine and health. This means much in the matter of measures for the control of diseases and in organized medical service.

The hospitals and dispensaries of India are, as a rule, either state supported or state aided, though their internal administration is, in many cases, controlled by local committees. The medical officers are, for the most part, European or native officers in the Indian medical service. Excepting in the larger towns, there are no European nurses.

In India, as in Japan, the out-patient service of the hospitals is enormous. In fact, most of the medical charities are called dispensaries. These institutions, while they have some accommodations for in-patients, have extended their out-patient service until that is the characterizing feature. Medical institutions numbering over 4,000 in India are variously reported to care for from 500,000 to 1,000,000 in-patients a year and at the same time to give from 30,000,000 to 40,000,000 treatments in their out-patient departments.

Teaching hospitals of good standard are affiliated with the important university centers in Bombay, Calcutta, Madras, Lahore and Luchnow. Here, as well as at the fifteen less important medical schools of India, medical students are trained. In connection with several of these university hospitals are also schools of varying standards for the training of native nurses.

The customs of India, particularly the caste



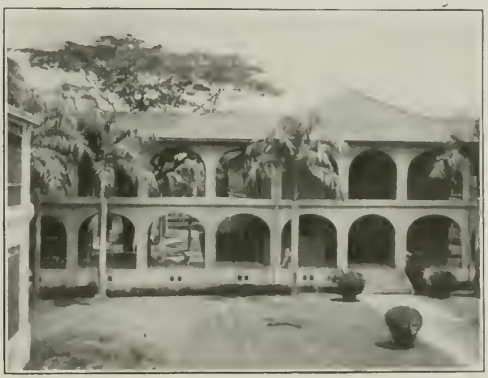
In its interior finishings and equipment the Kawasaki Hospital at Kobe, Japan, follows the most modern American hospital practice. Kawasaki is a general hospital of 450 beds, having provision for a large out-patient department and pathological laboratory.

system, raise serious difficulties in hospital administration. It is still considered improper in India, as it was but yesterday throughout the entire Orient, for women to nurse men patients. Deep rooted tradition requires the separation in hospitals of persons of different sexes, of different religions and of different castes. There are further complexities in the medical or nursing attendance of members of one caste upon those of another. A peculiar difficulty is attached to laundry work, which custom in India has decreed shall be done only by a special caste, the "dhobies," and in a special manner, usually very wastefully and inefficiently on the river banks.

Introducing modern hospitals to a country like India involves more than mere science!

Hospital and Dispensary Ship in the Philippines. This floating clinic has been used to ply among the smaller islands of the Southern Philippine Archipelago.

In developing the Philippines, the Americans since their occupation in 1898 have introduced hospitalization and medical care to a marked degree. The microscope supplanted the sword as the means of gaining the good will of the inhabitants; the martial spirit began to give way to the research habit and the instinct for healing.



Wing of Manila General Hospital.

The Bureau of Sciences and the University of the Philippines are two institutions of high scientific attainment. Their lives have not been without fluctuations of wide range in efficiency and standards. Their future, however, now seems assured.

A serviceable group of hospitals has grown up throughout these islands, not the least interesting of which was a hospital and dispensary ship, which for a time plied among the southern island of the archipelago, giving medical relief at regularly recurring periods to the inhabitants of coast villages.

Increasingly all affairs of the Orient are coming to be of interest to the inhabitants of the Western world. This is particularly true of questions of health and disease. Infection refuses to recognize national boundary lines. The fight against disease must be carried on internationally.

As a matter of self-protection, therefore, we are beginning to understand that we must interest ourselves in conditions throughout all countries of the world. At the same time, in no way can the humanitarian instinct so strong in the American nation, express itself more fittingly and more forcefully than by aid to other countries in the fight against disease, in the common effort to bring science and medical service to bear to improve health and to increase happiness.

A dispensary group in a village of the Trobriand Islands, Papua.

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PROGRESS OF THE A. H. A. IN 1921

By A. R. WARNER, M.D., Executive Secretary, American Hospital Association, Chicago

THIS account of the progress of the American Hospital Association in the past year is written with reference to and practically an addenda of the corresponding article printed a year ago.

No policies or activities in operation a year ago have been suspended. Some have been broadened in scope and all have been strengthened by the wider sphere of influence gained by the association. All have also been strengthened through the experience of a year of operation. The organization is running distinctly more smoothly.

While the American Hospital Association can enumerate no mean number of specific achievements during the year, 1921, officers of the association take keenest pride in its gain in prestige and influence. This enlarged sphere of influence has been brought about by a single policy from which the association has not swerved—Service. Numerous memberships now come unsolicited. The hospital public has assumed for the association a field and a function, and the association is bending its most honest efforts to render aid in the manifold departments of that field. An extension of opportunity for service comes through the associate institutional membership which was recently established.

The principal activity in the year 1921 was a strenuous effort to secure for the association the prestige, the position, the influence and the opportunities that have been attained by national associations in other fields. The guiding policies in these efforts were first: To make the service given by the association to the members and to the field the very best possible; second, to increase the number of contacts on the service basis between the association and hospitals or individuals of the field; and third, to demonstrate the value and the service given by the association before expecting to get memberships.

With the following facts we are quite pleased if not entirely satisfied because they certainly indicate a considerable progression in the general standing of the association, and because they indicate opinions of others than officers of the association.

(1) The general correspondence with the office has much increased and it is clear that more of the writers expect the answer to include some helpful information or suggestions. They assume they are writing to the right place for the facts desired. They assume for the association a field and a function.

(2) Communications from the office of the association certainly receive more careful consideration, especially those to the presidents of the institutional members.

(3) Analysis of the registration at the annual conference brought out these facts: (a) There were more than the usual number of trustees present. (b) There was a more uniform representation from all the state and provinces, i.e., more states and provinces were represented than usual and there were larger numbers from the distant states and provinces than usual.

(4) Unexpected and unsolicited applications for membership, both personal and institutional are coming in. Communications from the office of the association could not have been the direct factor, at least, in convincing these persons and hospitals as to the value of membership in the association.

(5) "What are we getting for our membership dues" no longer creeps into correspondence or discussions either expressed or unexpressed. In its stead there is a feeling of satisfaction in being a constituent part of the association and its activities.

(6) The suggestion came voluntarily from one of the institutional members that all use the words "Member of the American Hospital Association" on annual reports, stationery and other papers "because membership now means something."

This suggestion was transmitted to all other members by Bulletin No. 38. In addition to this there have been repeated instances when it was clearly evident that a hospital has assumed that the association is working for progress in the hospital field and has decided it best to be a constituent part of such an activity.

On receipt of the report of the committee on forms and records many hospitals—not yet institutional members of the association—wrote of their desire to cooperate in the work. That they are not now institutional members or that they have not seen the way to do more is clearly the fault of the association.

The specific achievements of the year of a more tangible type are these:

(1) Two new geographical sections have been added—Indiana and Colorado—and from six more states we hear of the determination to make prompt application.

(2) Four resolutions relating to hospital oper-

ating policies were approved by the trustees, then adopted by the association, and have been given publicity as policies for the careful consideration of all hospitals. They are not always put into operation at once but their continued official existence steadily and surely bend hospital practices to their tenets.

(3) No new service bureaus were added but two—legislative and construction—have been brought considerably nearer. Both now seem certain for this year.

(4) One valuable report was completed, approved by the association, and distributed to every hospital of Canada and the United States of over forty beds—the report of the committee on forms and records. We believe this report will prove a contribution to hospital standardization. The cost of this, approximately $15,000, was contributed by a good friend of the association.

Careful studies of four other subjects have been begun, and valuable and exhaustive reports will be made later.

(5) The "commercial exhibit" was given a substantial start on its transformation into a real exposition of hospital equipment and supplies. The size was doubled and the variety of the exhibits much extended. The exposition at West Baden will speak for itself to all who saw it.

(6) The net increases in membership were institutional, fifteen per cent; active personal, twenty-three per cent; associate personal, nine per cent; life personal, ninety-three per cent. The value of these figures is in the word "net." In the year the books were cleared of all "lost addresses," "arrears in payment" and a few entries objectionable for other reasons.

(7) The scope of the association was broadened to include an associate institutional membership composed of "corporations, associations or other organizations existing for the promotion of public health but not having direct responsibility for the care of patients." Applications for this membership are beginning to come in.

(8) Two new departmental sections were established. Early in the year the trustees authorized a dietetics section. This section held its first meeting at the West Baden conference. And at West Baden fifteen hospital trustees met and formulated a petition for a trustees section for the discussion of their own problems. This was authorized and the first meeting will be held with the 1922 conference.

(9) Fourteen bulletins on various subjects were issued to institutional members in the year. It is the opinion of association officers that the 1921 series was more valuable than the 1920.

(10) Some new extensions in publicity service were inaugurated.

(a) Sets of the five daily bulletins published during the conference were sent to all personal members not present and to the superintendents and presidents of all institutional members not having official delegates registered.

(b) All bulletins to institutional members are now sent to the presidents as well as to the superintendents of these hospitals.

(c) The addressograph plates of the personal members were "tabbed" according to hospital connections, making possible group selections by the machine. The purpose of this was to make it easy to send special matter to various groups. The beginning was made in sending some material to the trustees of hospitals.

(d) The quarterly bulletins addressed primarily to personal members constitute the official news publicity of the association. These are now sent not only to the personal members but also to the president and superintendent of the institutional members.

(e) One bulletin on two laws recently enacted in Connecticut which strengthened the legal status of the hospitals of that state was sent to the geographical sections. As the geographical sections increase in number and as the machinery of the association gathers in more valuable information this service will grow. The legislation service bureau, when it materializes, will be especially fruitful in material for such bulletins. It will be the policy of the association to work through the geographical sections in all matters of state legislation.

(11) In the past year the association began the most ambitious piece of work it has ever attempted. This is the determination and the formulation of the ideal preparation, training and education of the hospital social worker. The committee has been appointed and announced. It is at work and plans to give its report at the 1922 convention. Funds for the work will be contributed partly by the organizations especially interested through members on the committee, partly by the New York School for Social Sciences and the rest by the Russell Sage Foundation. This has naturally grown out of the survey of and the report on hospital social service made last year.

From the above facts the trustees and officers of the association feel justified in assuming some pride and pleasure over the situation and the progress made in the past year. The somewhat larger and markedly more active and more interested membership will, during the coming months, provide material for more and better work. The strengthened prestige of the association will furnish larger opportunities for service. Progress in 1922 will be accelerated or someone must be held accountable for the failure.

THE HOSPITAL SITUATION IN SOUTH AMERICA*

By FRANKLIN H. MARTIN, M.D., Director General, American College of Surgeons, Chicago,
With Notes by Dr. W. J. Mayo, Dr. Thomas J. Watkins and Dr. Francis P. Conigan

THE hospitals in South America, not unlike the hospitals in other civilized portions of the world, may be divided into several classes. One of the objects of a trip made with Dr. W. J. Mayo, 1920, and another with Dr. Thomas J. Watkins in 1921, was to obtain a bird's-eye view of the hospitals in the cities we visited. We passed through, very hurriedly of course, a number of the principal hospitals in each of the capitals, Valparaiso and a few other cities. With only minor exceptions, they all had suitable buildings and interiors, and opened upon extensive and attractive gardens or patios. Without exception, I believe all of them have a system of case records, and the average of completeness in this respect was above that found in the United States.

Everywhere working laboratories, including x-ray outfits, were in evidence and were pointed to with pride. The operating rooms, with but few exceptions, were modern, and contained the most approved sterilizing apparatus. Conveniences for diagnostic purposes and instruments for operating rooms were in abundance. Nearly all had provision for postmortems, and up-to-date morgues. The provision for graduate interns seemed to be adequate, especially in those hospitals connected with teaching institutions. Nearly all of the large hospitals had rather complete out-door dispensary departments. Some were deficient in modern plumbing, but a large percentage of the important hospitals were elaborately equipped with these conveniences. Some had the most approved hydrotherapeutic departments, and modern laundries and kitchens were in evidence in nearly all of the larger institutions. Those which did not have the full equipment as enumerated above were not a few, but nearly all of these are in line for a rapid readjustment. Especially is this true since their teachers are thoroughly alive to the requirements of a modern hospital.

Two defects which were evident in nearly all of the hospitals visited were the lack of screening against flies, mosquitoes, and other insects, and a well organized system of nursing. The former of these will soon be remedied, but the latter is a difficult problem with which the faculties are wrestling. It was not a defect pointed out by us, but a fact freely admitted by our hosts.

The hospitals in the Panama Canal Zone are a delight to every American physician who visits them. They have been built and are controlled by the government and are the last word in scientific construction. The Colon Hospital on the eastern or northern coast and the Ancon Hospital on the western coast accommodate 500 to 800 patients, respectively, and afford accommodations not only to those who are connected with the Canal Zone work, but also to private citizens.

The Ancon Hospital was built at a cost of about $2,000,000, and its equipment cost $1,000,000. It occupies an ideal position on Ancon Hill, overlooking the village below, the administration building, and the new Balboa village at the point of entrance. This building with 800 beds, which in an emergency can accommodate 600 more, has a staff of thirty-five physicians, six interns, and approximately 100 nurses. Colonel Louis T. Hess of the Medical Corps, United States Army, is in charge at the present time.

The Government of Panama is now constructing a large and up-to-date hospital in Panama City on the old exposition grounds down by the sea. It will displace the present St. Thomas' Hospital and will be called the New St. Thomas' Hospital. The superintendent of this hospital is likewise a United States Army medical officer, Major Edgar A. Bocock. There are also several private hospitals conducted on the highest scientific plans.

Of his observations on hospitals of South America which he visited, Dr. Mayo gives the following account:

Peruvian Institutions

"Peru has much to interest the medical sightseer. As is the case all through South America the hospitals are of Spanish design, excellent for the tropics. They are usually of one story, with high ceilings, large high windows, large porch effects for shade, and surrounded by fine gardens. In Lima are two large charity hospitals. The older, the Hospital de Santa Ana for women and children, boys up to 10 years of age, has a capacity of 300 beds. A large new hospital is now being built to replace this old one, in which the government expects to install American nurses and American methods for caring for patients. One of the greatest innovations will be the introduction of wire screens against flies. Hospital Dos de Mayo for men was founded in commemoration of the victory over the Spanish fleet in Callao, May 2, 1866. The independence of Peru had, however, been declared in 1824. This hospital con-

*Based on a summary of material prepared for "South America from a Surgeon's Standpoint," a book by Dr. Martin, just off the press.

tains 700 beds and is more modern than the Santa Ana Hospital. Miss Soper, a trained nurse from London, has been working courageously for four years to develop a nurses' training school and to improve the nursing and hospital conditions generally. The results of her efforts are beginning to show.

"Both the Hospital de Santa Ana and the Hospital Dos de Mayo are maintained, as indeed are all municipal charities, from the public charity fund, which is accumulated by private contributions and public amusements.

"The Italians, of whom there are many in Peru, maintain a good hospital, and the French also have a very good hospital of forty beds. There are a number of private hospitals, notably Dr. Febrea's, which is quite modern in its appointments. Dr. Graña's hospital, with a capacity of 100 beds, now being built on the seashore about three miles from Lima, will be the last word in modern construction and equipment. American nurses and a nurses' training school will be installed. There are several excellent hospitals connected with American mines in Peru, with American physicians and nurses.

Coast Hospitals of Chile

"The port towns of Arica, Iquique and Antofagasta have hospitals, all of which we visited. We visited also a large military and civil hospital in Tacna, situated in a fruitful oasis near the Peruvian boundary. The hospitals of Chile are supported largely by the state. The hospitals at Iquique and Antofagasta are much larger and have better equipment than those at Arica and Tacna. They are under the direct charge of a progressive Catholic bishop and are managed by French and Italian Sisters. Each hospital has a training school for about forty nurses, drawn from the lower and poorly educated classes, who are really drudges for the sick rather than nurses, and a training school for about thirty midwives. The bulk of the patients in these hospitals are from the outlying nitrate (saltpeter) mines. The buildings are unscreened, and although flies are not usually numerous, they are uncomfortably evident in the medical wards. Water is scarce in this rainless region; it is piped from the mountains long distances, and is expensive. Lack of trained nurses, lack of adequate water supply and lack of screens are the weak features in an otherwise excellent hospital system, but these defects are being rapidly overcome.

"The great American mining corporations on the coast and inland, such as the Guggenheims, have their own hospitals. These corporation hospitals are screened and thoroughly equipped with American appliances, and have American physicians and trained nurses. Dr. W. F. Shaw, who has had twenty years' experience in the tropics, is in charge of the Guggenheim hospital.

Valparaiso Hospitals Resemble American

"Valparaiso, a city of about 280,000, has a number of fine hospitals, built with the high ceilings, verandas and patios typical of the Spanish plan. There are separate hospitals for men and for women, and for children under 10 years of age. All the newer hospitals are built on the general type of the American hospital, with pavilions for men, women and children; the same operating rooms, laboratories, etc., are used for all. There are pavilions for private patients in which the rates, the cheapest of any in South America, range from $2.50 to $10 a day, gold. This includes ordinary nursing and medical care. No fee is charged for operations if they are performed by the surgeon who is paid by the year from the hospital fund. Other surgeons make their own arrangements with patients.

"The British and American residents maintain a hospital of about 100 beds. It is under the supervision of a British surgeon who, since he has no license to practice in Chile, employs a Chilean licensed physician to act ostensibly as chief. This subterfuge is employed also in some of the large mining hospitals. Needless to say, such arrangements are sources of irritation to the Chilean physician. A hospital is maintained by the German colonists located on a sightly spot on a hill. The attending surgeon is Dr. Muenich, grandson of a German colonist, and one of the best surgeons in Chile.

Santiago Hospitals Well Equipped

"Santiago, the capital and largest city of Chile, is situated at an elevation of 2,000 feet on the river Mapacho in a valley surrounded by snow-capped mountains. The site of the city is unusually beautiful, and, unlike the cities farther north in Chile and Peru, it is blessed with rain. The city government is progressive and excellent. All things considered, Santiago may be said to be the most beautiful residential city on the west coast, if not in South America.

"The hospitals in Santiago are very good. The old ones are being remodeled along American lines. The surgeons are doing excellent work. Prof. Lucas Sierra, well known in America, was abroad preparing plans for greater hospital extension. His colleague, Dr. Amunátegui, dean of the medical school, and one of the foremost surgical teachers of South America, was in the city, but expected to leave shortly to join Dr. Sierra on his mission.

"Many of the thirty hospitals in Buenos Aires

are old, but practically all are in a process of reconstruction along modern lines. The hospitals have high ceilings, large window spacing, verandas and gardens, well suited to the tropics, but they are not screened. Trained nurses, as we understand the term in the North, do not exist in South America. There is only a small middle class from which to draw material for nurses; it is obviously impossible under present conditions to obtain students from the cultured class qualified for such work. However, the general average of education is being raised, and new training schools are being established with American nurses in charge. The records in all the hospitals are extraordinarily good. Few hospitals in America can show records equally well kept.

"Almost all the hospitals and charities in Buenos Aires are financed by the Woman's Benevolent Association which collects and dispenses funds. The municipal authorities are said to be very jealous of this organization; but it is so strong, and the money is so well administered that no real objection can be filed against it.

"The Rivadavia Hospital occupies almost an entire block of land and is divided into medical, surgical, gynecologic and maternity departments. In the museum of the latter are many rare and well preserved specimens, as well as a very complete and well selected teaching collection. In the department for children is a fine infants' clinic.

"The new medical hospital is under the direction of Dr. Agote. Its organization and its records are models of excellence. Clinical work and investigation of the most extensive and advanced character are being carried on. Dr. Agote was the originator of the citrate method of blood transfusion and has perfected the technique of the procedure.

"The British Hospital in Buenos Aires has 200 beds. Dr. O'Conner, senior surgeon, well known in the United States by his frequent contributions to American surgical journals, and Dr. Robert Halahan are the surgeons in charge. Dr. Halahan, the junior surgeon, was educated in Ireland about twenty years ago. After coming to Buenos Aires he passed the examination given in Spanish. He is quite American in his methods. Many Americans go to this hospital when they are ill.

A Visit to Uruguay

"The hospitals in Montevideo are modern and equal to any in South America. The older hospitals are built in the Spanish pavilion style, usually one story, with gardens between the pavilions. The new hospitals are several stories high. Here, as elsewhere in South America, there are few trained nurses and an absence of screens. I was told that when screens were placed no one respected their use, and, indeed, in the few instances screens were seen they were carefully propped open. With the exception of the hos-

A view of the new St. Thomas Hospital in Panama, showing a portion of the main building as seen from the interior of the quadrangle.

pitals maintained by the colonies from various countries, those in Uruguay are supported by the government. Accommodations are provided for pay patients, and the price of rooms in the private pavilions ranges from $3 to $6 a day. One beautiful hospital (for women) is under the direction of Dr. Pou Orfila, a noted surgeon. The Italians have a very beautiful hospital with many interesting features. To prevent flies from entering the operating rooms, persons pass from the main corridor through a small anteroom which has blue glass ceiling, sides and door. It has been demonstrated that flies will not pass through this blue-lighted space."

Dr. Alfonso Lamas conducts a small private hospital in Montevideo where Dr. Watkins and I (Dr. Martin) were taken for a clinical visit. Later we went to a well equipped British Hospital where Dr. Lagos does his work; also to a new Italian Hospital, one of the show-places of medical Montevideo, which is built along very artistic lines and is the last word in modern hospital construction. We then visited the large civil charity hospital which is closely connected with the medical department of the university.

Dr. E. Pouey, the leading gynecologist of Uruguay, has a fine hospital for women, just completed by the university. Dr. A. Navarro, another prominent surgeon of South America, has splendid hospital facilities and surgical material.

A Brazilian Municipal Hospital

The Municipal Hospital at São Paulo, Brazil, is one of the teaching institutions connected with the university of that country. We were taken on a tour of inspection through it. The building is large and substantial, with high-ceilinged rooms and an abundance of large windows. Around it is a park-like garden filled with trees, shrubs, and flowers, and in the center is a large patio with a playing fountain. The facilities for the care of municipal patients are not sufficient. The hospital is built to accommodate 500 patients, but at the time of our visit it contained 900. Each of the 500 beds had an occupant and at the foot of practically every bed, in a broad aisle, was a mattress on which there was another patient.

We inspected a pavilion devoted to orthopedic surgery and met its chief, Dr. Luiz de Rezende Puech. He is a genius and, like all men of that type, is an enthusiast. While knowing little of orthopedics, we were fascinated by this man who is a devoted slave to his work. As we passed through his crowded wards the patients, cripples of all forms, among them many children, fairly clung to him because of their love for him. In several places in his pavilion two children occupied one bed, and there were also many children on mattresses on the floor. This distressing condition of overcrowding is well recognized by the authorities and a definite effort is being inaugurated to remedy it. The large foundation of a new building, which will greatly increase the capacity of the hospital when its superstructure is built, was pointed out to us. However, work on this building had been temporarily abandoned because of the present high cost of production.

At São Paulo we also inspected the maternity hospital, a pay and charity institution, which is under the direction of Dr. Raul Briquet. The hospital accommodates from 80 to 100 maternity patients, and Dr. Briquet does the operating that develops from such cases. The building occupies a site in the residence section of the city, and overlooks the city proper which lies in the valley below. The private room and ward accommodations are very attractive, and midwives and students of medicine are admitted for instruction.

The Sanatorio Sta. Catharina, where we witnessed an operation, is a hospital conducted by a congregation of German Sisters, has a capacity of 125 beds, and is open to all operators.

Later we made a short inspection of the Instituto Paulista which has three services—a surgical, a medical, and a separate department of 125 beds for mental diseases. It occupies a beautiful site, its buildings are large and its grounds commodious and beautiful. The hospitals here, like those we had visited in other cities of South America, are open to two principal criticisms by the surgeons of North America: first, the lack of adequate training schools for nurses; and, second, the lack of screens for the windows of their wards, operating rooms, and private rooms.

Institute at Rio de Janeiro

In Rio de Janeiro we were driven to the north end of the city where on an elevation near the sea is the experimental laboratory of the Oswaldo Cruz Institute, named for Brazil's Gorgas—Dr. Oswaldo Cruz. The building is most ornate, four stories in height and of Moorish construction. The government now appropriates one-third of the expense of the Institute's upkeep. It is a great experimental center for study and teaching in connection with tropical diseases.

Dr. Watkins' comments on the Institute follow:

"Oswaldo Cruz—doctor, sanitarian and health commissioner—freed Rio de Janeiro of yellow fever in six months' time. He was a man of large mind, keen scientific interest, and of great industry, who accomplished much and died an old man at the age of forty-four, a patriot and a martyr to his country. He also planned and induced his country to build the Oswaldo Cruz Institute. It is a large, architecturally beautiful,

marvellously arranged and excellently equipped institute for research study of tropical diseases. It is under the direction of his pupil and friend, Dr. Carlos Chagas, who identified and completely established Chagas' disease, identifying the germ, the host, and reproducing the disease in animals. Dr. Chagas recently made a visit to the States under the direction of the Rockefeller Foundation. The institute is developing an excellent pathological department under the direction of Dr. Bowman C. Crowell of the Rockefeller Foundation. Dr. Crowell has had an extensive experience with tropical diseases in the Philippines and is remarkably well adapted personally and otherwise to the work. The necessity for such work is well illustrated by the practice of Dr. Alvaro Ramos, one of the leading surgeons of Rio de Janeiro, who for years sent all of his pathological tissue to Munich for diagnosis at the expense of sixty marks for each specimen. Now Dr. Ramos and many of the other surgeons send all of their pathological tissue to the Oswaldo Cruz Institute, which has established a real school of pathology."

A view of Hospital Pereira Rossell, showing the boys' pavilion.

Policlinic is Complete

In Rio de Janeiro I visited the Policlinic, organized and directed by Dr. Aloysio de Castro. This clinic is for the poor and deserving and is supported by the municipality. It is a substantial, four-story building located on the Avenida Rio Branco, in the center of the fashionable shopping district of Rio de Janeiro, and all but the lower store front is occupied by the clinic, its laboratory, pharmacy, operating rooms, x-ray rooms, and administration rooms. It is an artistic structure and like all public buildings in Rio de Janeiro, it was built for all time of stone, steel, and marble. Its furnishings are substantial and its administrative offices and lecture rooms are elegant. The land and the building were given by the government, and the clinic is maintained by an annual appropriation from the government.

All medical cases are treated here, and minor surgical operations that can be performed without hospital accommodations. Students from the university receive instruction in the clinic, the attendants being teachers on the faculty of medicine. So far as I could learn, there seems to be no special provision for the teaching of graduates in medicine.

Misericordia Hospital

The Misericordia Hospital, a large municipal institution in Rio de Janeiro with several hundred beds, was an interesting place to visit. There we witnessed an operation by Dr. Alvaro Ramos. It was skillfully handled and we could not but be pleased with the correctness of the diagnosis. Dr. Ramos is a skillful surgeon. His technique is that of the French, and of the character that one would approve for an operation upon himself. These are capable, daring operators. Dr. Ramos showed us his wards, large airy rooms, the laboratories, and the large out-door dispensary containing hundreds of waiting patients.

We then drove with Dr. Ramos and Dr. Franklin P. Pyles (an American surgeon) to the Strangers Hospital, the English hospital, built in an attractive location on a hill overlooking Botafago Bay. With Dr. Ramos we also inspected a large insane hospital in which he has a surgical service.

While in the city we visited a well equipped hospital which had been the residence of a wealthy citizen, and which was located in an extensive private garden. It is exclusively for maternity cases and attendant ills. We were met by Dr. de Castro, the director of the faculty. We saw two operations skillfully performed. The operating technique was conventional and good.

We drove to another Maternity Hospital, where we saw Dr. Magalhaes, a handsome man with the face and appearance of our own Marion Sims in his younger days. He showed us his hospital and we saw him do a good operation. There has been an attempt to screen this hospital under the inspiration of a South American who recently visited North America, but it has been a failure because instead of placing a large screen on the outside of the large window casing in a position not to interfere with the opening inward of the French windows, the screens had been placed in one or two of the window lights of the French windows, leaving the glass panes in the balance. To make the screens effective, the windows must remain closed and the air is excluded. If the windows are opened, as they should be most of the

time, the screens are of no use. It was evident, of course, that the screens were not a success and had failed in practice to popularize themselves.

Dr. Francis P. Carrigan visited the hospitals of Ecuador and Bolivia and makes the following observations on them:

Neuvo Hospital Civil

"In Quito, Ecuador, I had the pleasure of visiting the Neuvo Hospital Civil now in course of construction. Dr. Ricardo Villavicencio Ponce acted as my guide and showed me the plans for the finished structure. It is a magnificent plan which calls for the expenditure by the government of about seven millions of dollars, and contemplates a complete hospital with all departments affiliated with the medical department of the university. Dr. Villavicencio, a graduate of the University of Brussels, is professor of surgery in the university. The construction is far enough advanced so that with his aid I was able to get a good idea of the contemplated structure. One of the striking features is a graceful pergola with a slightly curving double row of solid columns supporting a solarium at least a thousand feet in length. The buildings are located on an elevated site so that they overlook the city and face the beautiful Mount Pichincha across the valley. A tunnel is being constructed which will penetrate the knoll on which the hospital stands. This tunnel will pass under all of the buildings and will carry the drainage from the hospital beyond the valley in which the city lies. With its beautiful location and in this wonderful climate it should be a notable institution when it is completed.

"Another fine institution in Quito is the new Maternidad, a hospital devoted to gynecology and obstetrics. It was organized by its able director, Dr. Isidro Ayora, who is also professor of gynecology and obstetrics in the university. Dr. Villavicencio and Dr. Ayora are now associated in the expansion of the work of the College in Ecuador and are worthy representatives of their country.

"In the General Hospital of Guayaquil the ability and reputation of Dr. Juan Rubio have contributed to build up an ophthalmological department that is somewhat out of proportion to the size of the hospital, but which in its completeness and general arrangement gives evidence of the excellence of this talented man. Diseases of the eye seem to be very prevalent in this country, perhaps aggravated by the constant brilliant sunlight. For this reason, perhaps, I found that Dr. Rubio's service in Guayaquil, like that of Dr. Saenz in Quito, was of greater importance than would be the case in the eye service in a university hospital of corresponding size at home.

"During my stay in LaPaz, Bolivia, I visited a number of the hospitals and private clinics. The hospital situation in LaPaz is far from satisfactory. The number of beds is inadequate, a state of affairs with which we are not unfamiliar in this country. The condition of the hospital situation is well recognized by the local profession. Many of the present hospital buildings are old and lack modern requisites for a center of this size. The municipality has under construction a new hospital which, when finished, will contain all departments and will be a very modern and creditable institution of about seven hundred beds. It is ideally located on the outskirts of the city in a suburb well named Miraflores, which might be translated "A Vision of Flowers," the flowers of course in this latitude being in bloom throughout the year. At present this hospital has in general use about two hundred beds and a separate contagious disease department of ample capacity.

"The National Hygienic Laboratory of Bolivia is located at LaPaz. Its location is adjacent to the Miraflores Hospital. Under the directorship of Dr. Nestor Morales this institution has gained an enviable reputation in all of that part of South America. The various sera and vaccines which are recognized by the profession as of value in treatment and diagnosis are prepared in an excellent manner and under thorough scientific supervision in a government laboratory, whence they are distributed.

"The lack of adequate hospital facilities in Bolivia as elsewhere has been due in a large part to absence of a definite governmental policy with regard to scientific matters. As in our own country, political interference with the personnel of hospital staffs and of university faculties delays progress.

"The surgeons of Bolivia have the right spirit; they have vision and ambition for the best things in scientific progress; the leading men are all young and active, they have been trained abroad, and they are cognizant of the best things in scientific progress outside of the boundaries of their own country. Under their leadership Bolivia is undoubtedly at the beginning of great accomplishments."

METHODISTS DEDICATE HOSPITAL

Dedication of the west annex of the Methodist Episcopal Hospital at Indianapolis, Ind., took place on November 10. The building, with its 72 rooms and capacity of 375 beds, is the fourth structure erected by the board of trustees in the past sixteen years. The Indianapolis Methodist Hospital is the largest institution maintained by that denomination in the world, the property being valued at $1,100,000.

THE WORK OF THE CATHOLIC HOSPITAL ASSOCIATION IN 1921

By B. F. McGRATH, M.D., Secretary-Treasurer, Catholic Hospital Association, Milwaukee, Wis.

IN THE year 1921 the Catholic Hospital Association of the United States and Canada experienced marked progress. Beginning in 1915 with a membership of but a few hospitals and individuals, the number rapidly increased until, in the last year, it included a large majority of the Sisters' hospitals and about 1,600 individuals, mostly doctors. This growth has been the result of educational endeavors and an appreciation of the importance of organized activities for the promotion of hospital service.

HIGH POINTS IN 1921 PROGRAM

Among its achievements of 1921, the Catholic Hospital Association of the United States and Canada points with pride to (1) its increased membership both institutional and individual; (2) the organization of several state and district conferences for the consideration of local problems and legislation; (3) a successful summer school for technicians at Loyola Medical School; (4) the annual convention at St. Paul, June 21-24 at which special features were a "questionnaire book" and a model staff meeting; (5) the addition of new departments to its official publication; and (6) its present task of formulating its own standard on a high plane.

A progressive step during 1921 was the organization of several state or district conferences in various parts of the country. Indications are that this policy will be adopted quite generally during the year 1922. These conferences are sectional units of the main organization. Their purpose is to study and solve problems peculiar to the respective localities, to safeguard the interests of the hospitals in legislative action affecting hospital work, to combine wherever it would be conducive to common benefit, and to advance still further the general aim of the main association.

As in the previous year, the summer school for technicians was conducted in 1921 under the auspices of the association at the Loyola Medical School, Chicago. The report of this school indicates that very satisfactory work was done and that the policy of holding such summer courses is an effectual supplement to the activities of the association.

The annual convention, held at St. Paul, June 21, 22, 23, 24, was, in many ways, the most successful in the history of the organization. Many important problems were presented and discussed. One day was devoted to fourteen different conferences, covering the various phases of hospital work. In these conferences many details of practical value were brought out, a fact which was greatly aided by a "questionnaire book," a copy of which was supplied each delegate. This book was compiled from suggestions that had been solicited several months before the convention.

A feature of the convention was the demonstration of a typical staff meeting by the doctors of St. Catherine's Hospital, Brooklyn, N. Y. This was presented to a packed meeting of doctor delegates. The plan and the manner in which it was conducted made an impression on all and has proved to be a strong stimulus in this most important factor for hospital progress. The commercial exhibit at the convention was of high class and extensive. All applications for exhibiting space could not be accommodated.

During 1921, Hospital Progress, the official magazine of the association, experienced noteworthy success, and at the end of the year was established on an enduring foundation. The introduction of this publication into the work of the association has proved to be of inestimable value; in fact, it has been spoken of as the "heart of the association." Special features, which recently have been incorporated in the magazine, are sections for the training school and for staff doctors. A special section for the state or district conferences is now under serious consideration.

The Catholic Hospital Association is now engaged in formulating its own standard. This will include not only what is best in the standards that have been presented by other organizations, but also other factors tending to still higher uplift, factors in which this association has a special interest.

As in the past, the policy of the association will be to cooperate with all whose activities for the betterment of hospital service are guided by the principles that are true.

NEW FELLOWSHIP ESTABLISHED

A surgical fellowship amounting to $600 has been established at the Lebanon Hospital in New York City by Dr. A. J. Rongy. Each year three house surgeons are graduated and this fellowship will be awarded annually to the one who in the opinion of the medical board has had the best record during his entire term as a member of the house staff.

SOME STATE HOSPITAL ASSOCIATION PRESIDENTS

THE 1921 ACTIVITIES OF THE AMERICAN COLLEGE OF SURGEONS IN HOSPITAL STANDARDIZATION

By FREDERICK W. SLOBE, M.D., Hospital Standardization Department, American College of Surgeons, Chicago

An appreciable increase in the number of hospitals which have adopted the minimum standard of the American College of Surgeons may be noted in the survey of 1921. Whereas in 1920 a survey showed only fifty-seven per cent of institutions of the United States and Canada with a capacity of more than 100 beds on the approved list, the past year's report shows seventy-five per cent of this group have accepted the minimum standard. The chief difficulties experienced by hospitals in their endeavor to fulfill the minimum standard seem to be the development of a proper spirit of cooperation in staff meetings, the abolition of fee-division and securing adequate records.

DURING 1921 the American College of Surgeons conducted its third annual survey of general hospitals in the United States and Canada. The standardization program of the College has become so well known that a detailed description here is unnecessary. Since no change, as yet, has been instituted in the minimum standard, the College has obtained, year by year, statistics which are uniformly comparable. Judging all hospitals by certain fundamental essentials, it has secured a fair basis for comparison, so that a correct appraisal of the meaning of a place on the approved list may be obtained. This necessitates: First, a standard which is fundamental and undebatable, elastic enough to be applicable to all hospitals and yet so definite as to cause no misconception as to the main principles involved; second, a survey that is strictly uniform as long as the minimum standard remains unchanged; and third, a careful interpretation of all available data, rendering a rating that is impartial, impersonal and just.

Hospitals have indorsed the program in increasing numbers each year. Only eighty-nine had adopted the program in 1918, whereas this year seventy-five per cent, or 573 of the 761 general hospitals having a hundred or more beds, are on the approved list.

The number of medical and hospital organizations which have indorsed the program is also significant. A decided impetus has been given to hospital standardization by the acceptance and indorsement of the minimum standard by such influential and powerful organizations as the American Hospital Association, the Canadian Medical Association, the Catholic Hospital Association, the Conference Board of Hospitals and Homes of the Methodist Church, the Medical and Surgical Section of the American Railway Association, the Methodist Hospital Association, the Protestant Hospital Association, and numerous state, provincial and local organizations.

As an example of the far reaching effect of such indorsements may be mentioned the fact that the American Railway Association has recently recommended that wherever possible railway employees be treated in hospitals on the approved list of the College.

The survey was conducted through personal visits by a corps of seven hospital surveyors. These men, all physicians, were from medical schools and hospitals of various sections of the country. They were given a course of training at the College headquarters followed by survey work with experienced hospital visitors. This uniformity in training assured the College of uniform reports, which constituted an important feature of the survey. Whether a hospital was in California or Maine, therefore, each institution was surveyed on a similar basis. Further, by visiting many hospitals in a fairly wide range of territory, the visitors obtained a general, rather than a local, viewpoint. This policy of personal surveys by relatively few uniformly trained visitors is one of the most essential elements in the College program.

There are certain difficulties experienced by hospitals in their endeavor to fulfill the minimum standard which are worthy of special emphasis. Relative to staff organization, the chief difficulty seems to be the adoption of a type of staff meeting which actually analyzes the clinical results. Slowness in the development of a frank cooperative spirit among the physicians has been a great hindrance; as this spirit develops, the purpose of the meetings becomes more nearly realized. In the average hospital a combined staff meeting of this type is essential. Teaching hospitals and other institutions with highly specialized staffs and institutions with a staff of only one or two physicians form possible exceptions to this rule. In such instances departmental conferences, teaching clinics, and individual analyses take the place of the combined staff meeting.

An increasing interest by boards of trustees

in the professional policies of hospitals is apparent. This is gradually correcting a long-standing difficulty. Interlocking committee meetings between medical staffs and lay boards are effecting a better mutual understanding. When boards of trustees are presented each month with a medical analysis, as well as the usual financial audit, hitherto their chief interest, they become more interested in the clinical results.

Fee-Splitting is Stumbling Block

The adoption of an official resolution prohibiting fee-division has been a second stumbling block in many hospitals. Hospitals which have been slow to respond may be divided into two groups. In the first group are institutions in which, apparently, the practice has not been unknown and where, consequently, difficulty was expected. It was a distinct surprise, however, to meet opposition to passing a resolution in some hospitals of the second group having a high ethical status in communities or sections of the country where the practice of fee-division is practically unknown. Some of these hospitals were very hesitant about passing resolutions condemning the practice. When they began to realize, however, that they served as powerful examples for other hospitals in which the practice was prevalent and that the College must apply a uniform policy toward all hospitals, they eventually responded. That the viewpoint and stand of the College in this matter is amply warranted is evidenced by the impression gained by our hospital visitors that the practice of fee-division is present to some extent in practically every state and province, even though it may be practically unknown in some sections.

Case records are improving steadily although they still constitute the greatest difficulty in many hospitals. Two factors stand out most prominently in impeding the development of proper case record systems in hospitals. First, the lack of proper interest in the case records by physicians and hospital executives themselves; second, the lack of interns. The first is just as important as the second, because even a full quota of interns without adequate supervision will often fail to secure adequate records. If the hospitals do their share in supplying sufficient record facilities and personnel, and the staff members do their share by exhibiting proper interest in supervising the records, most of the difficulties in that connection will be solved.

Financing the Laboratory

Laboratory service has shown a similar steady improvement. There is a demand for equipment, technicians and pathologists, which has hitherto been unknown. One handicap to the development of adequate laboratory service is the system of making a separate charge for each laboratory test performed. This difficulty has been obviated in many hospitals by establishing a flat rate fee to include most of the usual laboratory tests. Tissue examinations should be included in this flat rate; otherwise it is difficult to obtain routine examination of all tissue removed at operation. Although the flat rate fee may not be applicable in all hospitals and may be inadvisable in some, it has been of tremendous help to many hospitals in solving their laboratory problems.

In 1920, out of the 697 general hospitals in the United States and Canada having a capacity of more than one hundred beds, 407, or fifty-seven per cent, were on the approved list. Of that number 193, or almost half, were listed with an asterisk.

In 1921, the total number of one hundred bed hospitals grew to 761. Of this number 573, or seventy-five per cent, are on the approved list. Of the 573, eighteen per cent are listed with an asterisk, showing the great relative decrease this year in the number of hospitals so listed. The asterisk has been used to indicate those institutions which, although they have instituted measures adopting the fundamental principles of the standard, have not developed them to their fullest efficiency at the present time.

Besides these larger hospitals, 704 of the fifty-bed hospitals were visited during the past two years. According to our records, there are about 875 of these hospitals, leaving about 150 which have not been visited. It is the hope of the College to visit all these smaller hospitals next year, so that they may be included in the next approved list. The total number of hospitals surveyed in 1921 was 1,017.

The basis for the survey is presented herewith:

The Minimum Standard

1. That physicians and surgeons privileged to practice in the hospital be organized as a definite group or staff. Such organization has nothing to do with the question as to whether the hospital is "open" or "closed," nor need it affect the various existing types of staff organization. The word *staff* is here defined as the group of doctors who practice in the hospital inclusive of all groups such as the "regular staff," the "visiting staff," and the "associate staff."

2. That membership upon the staff be restricted to physicians and surgeons who are (a) competent in their respective fields, and (b) worthy in character and in matters of professional ethics; that in this latter connection the practice of the division of fees, under any guise whatever, be prohibited.

3. That the staff initiate and, with the approval of the governing board of the hospital, adopt rules, regulations, and policies governing the professional work of the hospital; that these rules, regulations, and policies specifically provide:

(a) That staff meetings be held at least once each month. (In large hospitals the departments may choose to meet separately.)

(b) That the staff review and analyze at regular intervals the clinical experience of the staff in the various departments of the hospital, such as medicine, surgery, and obstetrics; the clinical records of patients, free and pay, to be the basis for such review and analyses.

4. That accurate and complete case records be written for all patients and filed in an accessible manner in the hospital, a complete case record being one, except in an emergency, which includes the personal history; the physical examination, with clinical, pathological, and x-ray findings when indicated; the working diagnosis; the treatment, medical and surgical; the medical progress; the condition on discharge with final diagnosis; and, in case of death, the autopsy findings when available.

5. That clinical laboratory facilities be available for the study, diagnoses, and treatment of patients, these facilities to include at least chemical, bacteriological, serological, histological, radiographic and fluroscopic service in charge of trained technicians.

HOSPITAL SITUATION IN ENGLAND AND WALES

By SIR NAPIER BURNETT, K.B.E., M.D., Director of Hospital Services, Red Cross Society, London, England

The past year has been fraught with financial difficulties for the voluntary hospitals of England and Wales. Prodigious operating costs, developed by the war, have plunged most of the hospitals into debt and, although gifts to these institutions have been made as freely as formerly, they have not kept pace with increased expenses. Hospitals most deeply involved are those to which medical schools with their highly specialized departments are attached. Sir Napier Burnett, in his analysis of the situation in the accompanying article, believes that the introduction of business-like methods of operation will serve in some measure to lighten the burden of debt which these institutions are carrying.

THE increased cost due to the war of maintaining the voluntary hospitals of England and Wales in proper working order, and measures suggested to bring matters as nearly as possible to a normal condition are to be made the subjects of discussion in this brief survey.

To make clear to the readers of THE MODERN HOSPITAL how the provincial hospitals of England and Wales stand financially I will quote from my report issued recently dealing with this question. I will also briefly review the situation of the London Hospitals.

The situation of the London hospitals, speaking generally, has hardly improved in the course of the past year. They are doing their best to emerge from the slough into which they have fallen, and money from the charitable still comes in freely, but the demands upon them increase and the heightened cost of maintenance has almost engulfed them. The number of out-patient attendances at the hospitals of London last year approached the enormous figures of 650,000,000. The cost of running them properly is now prodigious, with the result that all but a very few are heavily in debt.

The King Edward's Hospital Fund, the local voluntary hospital committee for London, has reported recently to the Hospitals' Commission with respect to the situation of the London hospitals. They estimate that the aggregate deficit on the maintenance account for the year ending December 31, 1921, will amount to at least £360,000 ($1,800,000). While this is less than the corresponding figures for 1920, the gravity of the situation is shown by the fact that without exception, all the larger general hospitals, including all the medical schools, will show heavy deficits. In addition, a considerable number of hospitals have now exhausted all their realizable assets, and without prompt and adequate aid will have no alternative but to close beds. It is a condition of the government grant of £500,000 ($2,500,000), which has to meet the needs not only of London, but of the whole of Great Britain, that a corresponding amount must be raised by the hospitals themselves. As the total deficit for the year were estimated by Viscount Cave's committee at £1,000,000 ($5,000,000), the importance of this rule is obviously manifest.

The Hospitals' Commission has provisionally

appropriated £180,000 ($900,000) for London which is just half the total deficits for the year as estimated by the King's Fund. However, if the London hospitals are to obtain even this grant, they must raise a similar sum. Considering, that some of the hospitals have already exhausted their available assets, the Commission has decided in certain cases to make emergency grants to tide these institutions over until the money which has to be raised has been obtained. In no instance are these grants more than half the amount of the estimated deficits for 1921 and moreover, the Commission has not felt justified at this stage in making emergency grants to any hospitals whose realizable assets exceed their liabilities, as such hospitals not having exhausted their credit are not compelled to close beds at once, but can continue their work, at any rate, for the present. It may therefore be gathered from the official statement that the receipt of a substantial grant does not imply that a hospital is relieved of the necessity of appealing to the generosity of the public. On the contrary as the grant is in no instance more than half the estimated deficit, it will be perceived that those hospitals which receive the largest share are precisely those which are most in need of additional revenue.

In England and Wales

The report on provincial hospitals presents a survey for the year 1920 of the finances of 572 institutions out of a possible total of 647 in England and Wales. It is gratifying to note that a good deal of progress has been made by hospitals in the extremely difficult task of adjusting their finances to post-war conditions. It will be superfluous to elaborate this point, as American hospital readers are aware that the necessary expenditure of hospitals in this country has risen by leaps and bounds and that this is the main reason why they are so greatly financially embarrassed at the present time.

The year 1920, that with which the portion of the report deals, was one of increased hospital expenditure, the enhanced cost of coal playing no small part in this increase. However, in my opinion, there is every indication that the high-water mark of hospital expenditure was reached in 1920, and that 1921 will show considerable reduction in the cost of many hospital commodities.

It may be said that the 572 hospitals dealt with in the report have a total of 32,862 beds, and in 555 of these institutions 396,408 in-patients and 1,710,574 out-patients, an aggregate of 2,106,982, received treatment during the year.

The total income of the 572 hospitals was £6,126,876 ($30,634,380), which exceeded their total expenditure by £1,037,441 ($5,187,205). These figures afford evidence that the belief somewhat widely prevalent that money is not given so freely to hospitals as formerly is contrary to facts. And yet these figures must not be taken altogether at their face value, but require careful interpretation, as the total income includes a goodly proportion of money which is to be employed only for special purposes and not available for ordinary maintenance charges, except in the form of interest derived from invested funds. Indeed, the ordinary income, which was £3,972,943 ($19,864,715) fell short of the ordinary expenditure by £462,956 ($2,314,780). In the Cottage Hospital group alone—hospitals containing fewer than 30 beds each—there was an excess of ordinary income over expenditure. Moreover, if the hospitals are classified according to the number of beds which they contain, it will be shown that, as a rule, the pressure so far as the 'waiting list' is concerned is felt most acutely by the large hospitals. On the other hand, the accommodation in those grouped as Cottage Hospitals is not always fully occupied. This supplies striking evidence that there is urgent need for some system of coordination to be established by the new hospital committees which are now being founded by the Voluntary Hospitals' Commission. If this were done in a businesslike manner, the smaller hospitals with their partly unused accommodation might work in cooperation with the larger ones so as to relieve the pressure at the latter.

Hospitals Should Have Federation

Further, the important work to be undertaken by these committees includes the gathering together of the Voluntary Hospitals in a county into a federated group with the objects of finding some uniform scheme for financing the hospitals within the area of establishing some system of coordination for the treatment of patients, of finding some common ground for the reduction of expenditure along the lines of cooperative buying—especially of non-perishable commodities, and of standardizing many articles used in hospital.

Yet another reform urgently awaited, which is likely to result in considerable benefit to the hospitals themselves, is the adoption of a simplified system of hospital accounts, one which will be uniformly adopted throughout the country.

It is both instructive and significant that the hospitals which show the greatest deficit are

those with medical schools attached. There are thirteen of these hospitals in England, exclusive of London, and they all contain more than 100 beds each. These are responsible for approximately fifty per cent of the total deficit of the whole group of 107 large hospitals. Twelve of these medical school hospitals possess 3,935 available beds with the average daily occupation during 1920 of 3,335.20 or 84.75 per cent. The ordinary expenditure exceeded the ordinary income by £242,359 ($1,211,795) and only one had a surplus.

Largest Deficit in Teaching Hospitals

Several explanations are possible for the large deficit. In the first place, hospitals associated with medical schools are staffed by physicians and surgeons of the highest professional and academic reputation, and partly because of this they attract those patients with the more severe types of disease. Further, these hospitals possess a complete system of "special departments," each fitted with very expensive apparatus. Again, the work carried on in these institutions is not limited entirely to the curative side of medicine; there is also a considerable range of research work carried out, investigating the causation of disease. These medical schools, being national institutions essential as training centers for medical students and nurses, require additional accommodation and equipment. Their valuable work as medical educational centers should give them a claim to the favorable consideration of such a body as the University Grants Commission.

A retrospective survey of the financial position of the English hospitals would not be complete without a reference to workmen's contributions as a source of income. This source of hospital finance has appealed to an increased number of hospitals during the year. Whenever a hospital cares to take the trouble to organize this form of collection, it almost invariably meets with a rich reward; but organization and propaganda in the form of public meetings held at the important workshops to explain the work carried on by the various departments of the hospital must be arranged if success is to be obtained.

Small Income from Patients

A feature worthy of comment is the fact that the money received from patients in return for treatment, care, and maintenance is meager. The small hospitals have long been making a weekly charge on their patients towards cost of maintenance, and their situation in this respect is fairly satisfactory. But an exceedingly small percentage of the ordinary income of the large hospitals is derived from patients. The point is further emphasized in the case of the thirteen large hospitals attached to medical schools. These hospitals in 1920 derived only 4.63 per cent of their ordinary income from patients.

This necessarily somewhat cursory survey of the hospital financial situation in England and Wales, of course, only presents some of the more salient features of a problem which has to be solved in the near future. While the position of the hospitals is by no means rosy, things are not quite so black as some pessimists contend. The introduction of businesslike methods of managing these institutions should and will result in very considerable saving. Progress in this direction is being made and encourages the hope that a path out of the slough of despond into which many hospitals have fallen will be discovered and the voluntary system with certain essential reforms and modifications will be continued.

STANDARDIZATION OF TECHNIQUE

Without destroying individuality, without making one surgeon a slave to the other's technique, without destroying initiative and the incentive to new ideas, how can hospitals curtail waste and extravagance and permit the credit and debit side of the ledger to approximate each other?

This question has been answered from the standpoint of the larger hospitals by Dr. Jerome Selinger, instructor of surgery, at the New York Post-Graduate Medical School and Hospital in New York City, in a recent address.

"The technique of the majority of doctors or the technique of any one doctor—when scientifically proved to be the best—should be accepted as the hospital routine. It should stand as the best and it should be rigidly adhered to until another method has been proved to be superior. It should not be difficult to adopt this procedure. Every first class hospital has its associated laboratories where pathological and bacteriological examinations can be made. Every new idea or theory as to technique—whether it be preoperative, operative, or postoperative—can be submitted to a surgical committee who will appoint a certain number of operative surgeons thoroughly to test the proposed change. The results obtained should be outlined in the form of a report and referred to the surgical committee for consideration. If the report is favorable and the new method proved to be better than the old, then it should be established as a part of the hospital routine, supplanting the older method."

With each surgeon striving for the best, Dr. Selinger believes, a standardization of technique is merely a localization of an already accepted general standardization. Each hospital will do its own pathfinding, the essential point being that all the surgeons should follow the pathfinders until a better way has been shown.

Much of the beauty of the earth is due to the life upon it. Take away all the vegetation, roll up the green carpet of the grass, throw down the awe-inspiring aisles of forest trees, and earth would become a desolate and unlovely place.—Robert W. Mackenna.

SOME PRESIDENTS OF CANADIAN ASSOCIATIONS

Mr. Joseph Needham
Saskatchewan Hospital Association

Dr. George F. Stephens
Western Canada Hospital Association

Dr. David Stewart
Manitoba Hospital Association

Dr. H. C. Wrinch
British Columbia Hospital Association

HOSPITAL PROGRESS IN CANADA DURING 1921

By M. T. MacEACHERN, M.D., General Superintendent, Vancouver General Hospital, Vancouver, B. C.

SATISFACTORY and encouraging progress has been made throughout Canada during the year of 1921 in the betterment of hospital service and of hospital conditions generally. There has been a much greater amount of intelligent publicity in respect to hospitals carried on through several avenues, particularly the press. Indeed, in many instances papers and publications which formerly did not participate in such publicity gave space to articles this year. Public interest in hospitals, therefore, has been more effectively aroused, and these institutions are recognized more than ever as important factors in community life. The public is manifesting a greater pride and constructive interest in its hospitals throughout Canada and the hospitals are extending a more considerate feeling towards their patients, especially on admission, so as to make them more receptive for treatment and hospital service.

Attention to the patient's comfort, happiness and welfare is probably being regarded more than formerly, and social service activities in our institutions are being recognized as an important factor for the general welfare of the patient. This is manifested in a greater development of social service departments in our institutions.

Five Provinces Have Associations

Five provinces in Canada, namely British Columbia, Alberta, Saskatchewan, Manitoba, and Ontario, have well organized hospital associations with the common aim of promoting efficiency, cooperation and coordination between hospitals in their various activities. These associations held conventions in each of their respective provinces during the year and in every case excellent programs were presented. The conventions lasted from two to three days and all sessions were open to the public. An important feature this year was the greater amount of time given to round table discussion and to public meetings during the evening sessions. Such meetings and organizations have assisted materially in hospital development, in the promotion of efficiency and in the formation of legislation relating to health and hospitals. In addition, there was held at Regina the Western Canada Hospital conference, made up of representatives from the four western provinces, which met the same week and at the same place as the Saskatchewan Hospital Association and the Western Canada Catholic Hospital Association. The Western Canada Hospital Association takes up such questions as are of common interest to the four provinces, and this year devoted most of its sessions to standardization, organization and efficiency. The meeting resulted in producing a fine stimulus to hospital activities in Western Canada.

It is gratifying to find on all sides increased interest in the American Hospital Association, and this year many delegates attended the West Baden convention. Throughout all the provinces more attention and importance are attached to the small hospital and efforts are being made to promote better teamwork between it and the larger institution. The training of technicians to do medical records, x-ray and laboratory work has materially assisted the small institution in carrying on these essential and fundamental services.

Medical Progress

The greatest work done in the medical department of our institutions in Canada during the year was that of the survey carried on by Dr. T. R. Ponton in connection with hospital standardization. This survey included every general hospital in Canada of fifty beds and over; in all seventy-one hospitals of fifty to one hundred beds and fifty-four of 100 beds and over. It was found on every hand that the institutions visited were not only ready to accept the minimum standard but enthusiastically anxious to have it established as quickly as possible. The visitor was welcomed every place he went. He found on every hand wonderful enthusiasm prevailing and a great deal of work already done. At the conclusion of the survey it was found that 62.7 per cent of the hospitals in Canada of one hundred beds and over were reaching the minimum standard, and in five provinces all the hospitals of one hundred beds and over were included in this year's list. The work of standardization for the coming year will be carried on more intensively in the institutions of fifty to one hundred beds.

In many of the hospitals in Canada staff organization has been developed in a highly efficient manner and is being generally approved by the medical men, for they have found it an important check on the efficiency of the institution with which they are connected, a stimulus to clinical interest and research, and a factor in promoting better feeling in the medical group. Similarly encouraging results are found in the development of medical records in hospitals. Most institutions today have records and a large number of them

have well organized and regulated record departments with a responsible person in charge. It is a foregone conclusion that every institution should have a record for every patient within its walls, and the medical profession, recognizing the value and importance of such a requirement, is supporting this movement heartily. It is also found that every hospital today, realizing the value of laboratory service, has some arrangement for carrying this on, either within itself or available nearby.

A better realization of the fundamental laboratory service needed in every institution, no matter how small or how large, has been evidenced, and institutions are seeing that such a service is provided. Probably the newest and greatest advance made in laboratory service this year is the increased interest taken in scientific dietetics and blood chemistry. Throughout Canada many such departments have been added and they are found to be of wonderful help in diagnosis and in treatment. Similar progress has been made in the improvement of means of applied treatment, especially in the various branches of physiotherapy and in the treatment of cancer by radium. Several hospitals in Canada during the past year acquired the necessary radium supply to carry on this special treatment.

Nursing Progress

The policy of the eight-hour system for nurses in training has been adopted by training schools generally. More attention has been paid to living conditions of nurses: proper homes are being built and overcrowding eliminated. Hospitals today recognize the need of providing good accommodations for their nurses and have had less trouble in securing applicants for their training schools during the past year than formerly. There is a tendency for each province, as far as possible, to have uniform courses of study for nurses in the various hospitals, and with the adoption of provincial registration this seems all the more imperative. Some of the larger training schools in the Dominion are becoming connected more and more closely with the university and greater interest is being manifested in nursing education. Further, the large hospital, recognizing its duty and obligation, is offering affiliation to the smaller institution in certain provinces, whereby the nurses from the smaller hospital may be permitted to take a part of their training in the large institution so that they may have full advantage of clinical facilities. This latter step has assisted the small hospital in carrying on a more efficient training school.

One of the most popular questions at all meetings and conventions has been that of hospital financing. It has been recognized that philanthropy and endowments can no longer meet increased expenses and, where formerly a charge of $1.00 per day was considered ample and fair for a public ward service, it is now increased to $3.00 per day. There is agitation from all institutions for increased financial support. It is generally recognized that the patients who can pay should be obligated for the whole amount of their charges, whereas those who cannot must be supported in some other manner.

A great deal is being said about increased provincial and municipal support and the establishment of a hospital tax in order to provide the necessary revenue for our institutions. Indeed, in some places agitation is being made for the placing of the hospital system on the same basis as the school system as far as financial support is concerned. Probably if a hospital tax of an equitable nature could be worked out in the near future it might be the solution for this problem. Saskatchewan has made real progress in the municipal system of hospitals, by which the land in a certain area is taxed for the building and support of the institution.

More attention is being given in Canada to cost accounting and uniform methods of keeping business records. Many hospitals today can tell you the cost of the various services given and thus better comparisons can be made. There has been little decrease in the average per capita cost of patients; it is found to range between $3.00 and $4.75 per diem. However, no fair comparison between institutions on per capita cost can yet be made owing to the lack of a standard basis of calculation. Hospital construction has been fairly active during the year and several additions to existing institutions, as well as new buildings, have been erected. Probably the most important construction of the year is the new three million dollar general hospital at Ottawa.

The Outlook for 1922

In 1922, it is expected that hospitals will consider more seriously than ever the requirements of genuine service to their patients and the more general application of the principles of hospital standardization, which after all is the basis of hospital service. During the year a more intensive study will be made particularly in the institutions of fifty to one hundred beds. A better solution of financial problems will undoubtedly be reached. Some will advance as a means state control or municipalization of hospitals; others will agitate a tax to place hospitals on the same basis of financial support as our schools. However, the coming year is sure to be one of real and genuine progress in all our institutions.

HOSPITAL PROGRESS IN BELGIUM IN 1921

By RENE SAND, M.D., Secretary General of the League of Red Cross Societies, Geneva, Switzerland

From a lagging position in the hospital field, Belgium has in the year just concluded made noteworthy progress. Among the nation's larger strides in advance are the plans of Brussels, with the moral and financial assistance of the Rockefeller Foundation, for a complete reconstruction of the medical school and hospital at the free university; the proposed remodelling of the hospital system and poor-law medical service; the placing of nurses' training on a basis equal to that of the United States and England; and the establishment of an official diploma of social workers. Few countries can point to a more forward-looking program than Belgium. Credit is gladly given American influences.

THE year 1921 has been marked, in regard to hospital progress in Belgium, by four events:

1. The agreement drawn between the Rockefeller Foundation, the City of Brussels and the University of Brussels for the complete reconstruction of the Brussels medical school.

2. The report* published in September, 1921, by the national council for welfare advising a thorough remodeling of the hospital system and the poor law medical service.

3. The royal decree of September 3, 1921, putting the training of nurses on the same basis as it is in England or in the States.

4. The royal degree of August 10, 1921, establishing an official diploma of social worker, subject to two years' training in special schools.

A few details will be given on each of these points.

Reconstruction of School

1. Belgium has two state universities (Ghent and Liége) and two endowed universities (the Roman Catholic University of Louvain and the free University of Brussels). Although each of these universities received a gift of 20,000,000 francs from the Commission for Relief in Belgium, the war has left the endowed universities in a difficult situation. Most of the professors, very poorly paid, are only part time; laboratories and libraries are inadequate; in Brussels, as well as in Louvain, the medical school is far away from the antiquated teaching hospitals.

Rockefeller Foundation representatives visited Belgium in the spring, 1920. They came to the conclusion that the medical department of the free University of Brussels offered the most promising opportunity for significant and influential development. After a discussion of the plans both in Brussels and in New York, an agreement was reached and formal contracts were signed in March, 1921, between the Rockefeller Foundation, the City of Brussels and the university.

The scheme adopted will cost about 100,000,000 Belgian francs, 44,000,000 being donated by the Rockefeller Foundation. It provides for the entire rebuilding of the teaching Hôpital St. Pierre, to include complete scientific equipment, an extensive outpatient department, social service, a department of medical records and a training school for nurses.

The new medical school will be built on an adjoining plot, and will be modeled on the best American examples. In the hospital, as well as in the medical school, the important posts will be occupied by full-time men; some of them are already being trained in the States.

The architects, Mr. Dewin, and a delegate of the city administration, Mr. Goossens Bara, have made an extensive tour in the States as guests of the Foundation. The architects' plans are now ready and it is hoped that the new school and hospital will open in 1923. This, of course, will not only mean a tremendous advance for the Brussels medical school, but also an all-round inspiration for the other three medical schools, and for all Belgian hospitals.

Free Medical Treatment for Poor

2. The national council of welfare has, since March, 1919, undertaken a thoroughgoing inquest on the poor-law medical service, which in every municipality is organized by a commission appointed by the municipal council.

The law provides that every man, woman or child must receive the most complete medical attention at the cost of the municipality if he or she is unable to pay for it. The provision must include surgical operations, the care of specialists, orthopedic appliances, etc.

However, the lack of funds and organization, as well as the shortage of nurses, social workers and hospitals, prevent these provisions from being carried out. So the council recommends to the minister of justice and charities:

*Conseil supérieur de la Bienfaisance. Rapport sur la réforme du service médical de la Bienfaisance. Bruxelles, Ministère de la Justice, 1921.

(a) To exact from every municipality an annual report laying down the facts about its medical service, its organization, its budget, and its personnel.

(b) To appoint medical inspectors who would advise the municipalities in their reorganization plans.

(c) To draw minimum standards for the poor-law medical services and the hospitals.

(d) To make it compulsory for every municipality to appoint a medical man as the responsible head of the poor-law medical service.

(e) To create a national and several regional joint commissions, where the delegates of the medical unions would discuss their professional interests together with the representatives of the administrations.

(f) To allow the poor to choose freely their own doctor.

(g) To coordinate the medical service of the mutual benefit societies (friendly societies, lodges) with the poor-law medical service.

(h) Gradually to create primary health centers in every town or village; secondary health centers in the important towns; and four superior health centers which would be the teaching hospitals of the four medical schools. A constant exchange of patients, doctors, advice and information would be organized between all these centers, in which the preventive as well as the curative side of medicine would be represented.

Nurses' Training Revised

3. According to the royal decree of July 12, 1913, the official diploma of trained nurse was given in Belgium without probation and after only one year of training. A few schools, however, had from the start adopted the English standards, following the example of the Edith Cavell School, founded in Brussels before the war by Dr. Depage, with Miss Edith Cavell as matron.

The royal decree of September 3, 1921, has now put the training of nurses on what is practically the American plan. The training is to last three years (two years for mental nurses), the probationers having to live during that time in the school or the hospital. To be admitted they must have completed their high school courses, and be at least seventeen years old.

The program is as follows:

First Year

Theoretical courses: Ethics of nursing; anatomy and physiology; hygiene, including hygiene of the nurse, the patient, the home and the hospital; bacteriology and parasitology; and home economics.

Practical training: At least six months probation in various employments inside the hospital.

Examination: Written, oral and practical.

Second Year

Theoretical courses: Medicine and surgery; nursing; dietetics; hygiene and prevention of communicable diseases; first aid; massage; care of the mother and child before, during and after confinement.

Practical training: Probation during the whole year in medical, surgical, contagious and special departments of the hospital.

No examination.

Third Year

Theoretical courses: Same as in the second year, but more developed; surgical nursing; social welfare.

Practical training: Probation during the whole year in medical, surgical, contagious and special departments of the hospital.

Final examination: Written, oral and practical.

For the public health nurses the program is the same for the first two years. In the third year, however, it includes: Child welfare, pedagogics, hygiene and prevention of communicable diseases in the home, prevention of tuberculosis and nursing of tuberculous patients, medical school inspection, home visiting, social legislation, hygiene and welfare, ethics of public health nursing.

Practical training consists of: Four months in children's medical or surgical wards or dispensaries, lying-in hospitals, mother and infant welfare centers, day clinics, preventoria; one month in tuberculosis dispensaries and wards; one month in a sanatorium; one month in a venereal ward or dispensary; one month in a school medical service; one month in a medical or surgical outpatient department.

Final examination: Written, oral and practical.

For the mental nurses, the program is the same in the first year. In the second year it includes:

Theoretical courses: Psychiatry, mental nursing, ethics of the dental nurse, hygiene and prevention of communicable diseases, first aid.

Practical training: Probation during the whole year in an insane asylum or colony.

Final examination: Written, oral and practical.

Examinations are to take place in a hospital or clinic, the board of examiners being appointed by the regional medical commissions (these are elected by the physicians, the chairman and secretary being government nominees).

A certificate of good health and a certificate of morality are required before the final examination.

4. The very words "Charity Organization Society and Social Work" were unknown in Belgium before the war. However, a few enterprising men and women started in Brussels during the occupation what was practically a charity organization society; in 1920 three schools for social work were opened in Brussels, one independent and two Roman Catholic.

Social Work New

A royal decree of October 15, 1920, created a national council of the schools of social work, and this decree was very significantly signed by the six ministers of finances, justice, and charities, interior and public health, education, industry and labor, and colonies. The same decree transformed the independent Brussels school of social work into a governmental institution, and granted appropriations to the other schools.

After one year work, the national council of the schools of social work submitted a full report to Mr. Emile Vandervelde, minister of justice and charities, who had taken the keenest interest in the matter, and the king signed the decree of August 10, 1921, which creates an official diploma of social worker (auxiliaire social).

To enter the school the pupils must be physically fit and at least 18 years old; their previous education must be such as to enable them to derive the full benefit of their future social training.

Requirements of School

This lasts two years, the first for general preparation and the second for specialization.

FIRST YEAR

Physical culture: At least five hours weekly.

Theoretical courses: At least 300 hours, besides seminary work, on following subjects: Political and administrative organization; general legal information; economics and sociology; labor legislation; public and private organization regarding education, charities and social work; individual and collective hygiene, including first aid and home nursing; psychology; statistics, surveys and office organization; the Congo and colonial welfare work.

Collective visits to at least fifty institutions or organizations.

Examination: Oral.

SECOND YEAR

The pupil has to choose between the six following specialties: Child protection; official and private relief or survey; hospital, settlement, hostel or canteen administration; welfare work in industry; mutual benefit, lodge, labor exchange or insurance work; library work.

Physical Culture: At least five hours weekly.

Theoretical courses: At least 150 hours besides seminary work.

Practical courses: Six months training in institutions connected with the chosen specialty; this includes, for the welfare work in industry, three months regular manual work in a factory.

Examination: Discussion of a written dissertation, based on the pupil's personal experience; oral examination on the theoretical courses. The examining board is appointed by the minister; inspectors will visit the schools and ascertain the qualifications of the teaching staff. The school cannot receive grants unless it is located in a center where abundant opportunities are available for theoretical and practical training in social work.

From the above it will be seen that Belgium, which was rather lagging behind, is making great strides forward, and in the right spirit. This very quick movement owes much to American influences. The Commission for Relief in Belgium, the American Red Cross, the League of Red Cross Societies, the Rockefeller Foundation, the Art War Book Committee, the Y. M. C. A. and Y. W. C. A. have contributed by their activities, advice and gifts to this magnificent efflorescence of social and health work.

PUBLIC HEALTH IN THE SPECIAL SESSION

The special session of the Sixty-Seventh Congress, which convened on April 11, and adjourned on November 23, had before it 143 bills concerned with some phase of public health. Of this number only six passed both houses of Congress and became laws. These laws included the Sheppard-Towner act for the promotion of the welfare of maternity and infancy; the Willis-Campbell anti-beer legislation; a general deficiency bill in which provision is made for the continuance of the Interdepartmental Social Hygiene Board; the creation of a Veterans' Bureau; and two minor measures, one allowing the Cincinnati post office to use a special cancellation stamp for the Health Exposition held there in October, and the other a bill providing for the distribution of surplus army tobacco to ex-service patients in hospitals. During the six months that the special session was at work, about 10,000 bills and resolutions were introduced in the House and about 3,000 in the Senate. Only about one per cent of this number was concerned with public health.

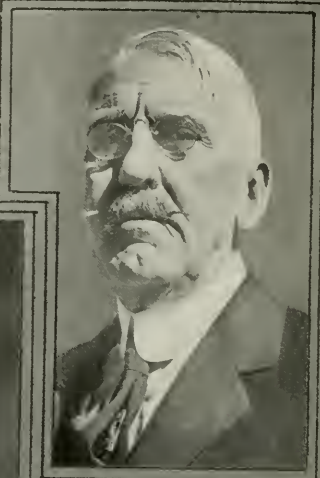
This information comes from the National Health Council, the Washington office of which issues bi-weekly bulletins on national health legislation. During the special session, sixteen of these legislative statements were published. All health bills before Congress were summarized in them in an impartial manner. Although intended at first only for members of the Council, the reports have been of such widespread interest and value to health workers that they are now distributed at cost price.

MICHIGAN CHANGES MEETING DATE

The Michigan Hospital Association will hold its annual meeting on January 18-20 at Flint. The convention was originally scheduled for December, but was postponed.

PRESIDENTS OF VARIOUS HOSPITAL ASSOCIATIONS

Dr. George O'Hanlon
President
American Hospital Association



Dr. John B. Deaver
President
American College of Surgeons

Dr. Frank Billings
President
American Conference on
Hospital Service

Mr. Pliny O. Clark
President
Protestant Hospital Association

Rev. C. B. Moulinier
President
Catholic Hospital Association

Dr. Frank Billings is professor at the University of Chicago Medical College and consulting physician to several of the leading Chicago hospitals. He was graduated by Northwestern University in 1881, and after an internship at Cook County Hospital, Chicago, he studied in Paris, London and Vienna for four years.

Dr. George O'Hanlon, new president of the American Hospital Association, has for many years been superintendent of Bellevue and Allied Hospitals in New York City.

Dr. John B. Deaver, president of the American College of Surgeons, is surgeon for several of the more important Philadelphia hospitals. He received his M.D. at the University of Pennsylvania, a D.Sc. at Franklin and Marshall College and the honorary degree of LL.D. at Villa Nova. He returned to the University of Pennsylvania to become John Rhea Barton, professor of surgery. He is the author of several works on surgical anatomy and allied subjects.

Mr. Pliny O. Clark is superintendent of the Presbyterian Hospital at Denver. He was former head of the Ohio Valley General Hospital at Wheeling, W. Va., and made a reputation for himself there.

Rev. Fr. Charles B. Moulinier is a faculty member of Marquette University in Milwaukee. He is connected in an executive capacity with *Hospital Progress*, the official publication of the Catholic Hospital Association.

ACTIVITIES OF THE U. S. PUBLIC HEALTH SERVICE DURING 1921

By C. C. PIERCE, M.D., Acting Surgeon General, United States Public Health Service, Washington, D. C.

THE work of the Hospital Division of the Public Health Service, in furnishing medical care and treatment to veterans of the World War, which was begun in 1919 and developed in 1920, has expanded greatly during 1921.

Legislation has been passed by Congress affecting this entire program and radical changes in the organization and administration of this work have been necessary, these changes culminating in the passage of an act approved August 9, 1921, creating in the national government the United States Veterans' Bureau, an organization which is charged with the authority to furnish to veterans of the World War all of the benefits contemplated in legislation which has been passed, including medical care and treatment.

Highlights in the year's work of the U. S. Public Health Service include the following:

Congressional appropriation of $18,600,000 for the construction of hospitals. Much of this work is already being pushed. It consists largely of the remodeling of existing federal plants rather than the building of new.

Creation of the United States Veterans' Bureau for the care of disabled veterans of the World War, to which the Public Health Service has furnished by far the largest proportion of beds.

Treatment in hospitals during the fiscal year of 183,000 patients, with dispensary care given to an additional 600,000.

The Public Health Service has continued to be one of the principal agencies in the hospitalization work required. This legislation contemplates the use by the director of the Veterans' Bureau of several official agencies in securing hospital facilities for the care of disabled veterans. The Public Health Service has furnished by far the largest proportion of hospital beds for World War veterans. Under this legislation the responsibility of the Public Health Service becomes purely one of supplying medical care and treatment in hospitals and dispensaries operated by it. At the present time it has in hospital under treatment a total of 16,526 patients, of which 13,773 are disabled veterans (October 22, 1921).

Temporary Program of Service

In addition, the Public Health Service, through its Hospital Division, has for a long period of years operated a small system of hospitals for the care of certain other federal beneficiaries. At the time this service became charged with the responsibility for furnishing medical care and treatment to veterans of the World War, it had in operation twenty-two small hospitals with a total bed capacity of about 1,500. It thus be-

An attractive view of the surgical unit and gymnasium of U. S. Public Health Service Hospital No. 63 at Lake City, Fla. The hospital is the property of the government and has a capacity of 130 patients.

At Newport (Fort Thomas), Ky., is located U. S. Public Health Service Hospital No. 69. It is leased property formerly used for hotel purposes. The construction is permanent and there is a capacity of 120 patients.

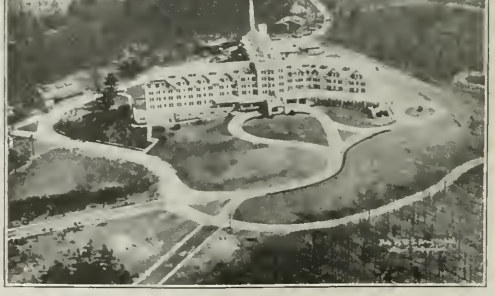
comes apparent that the Public Health Service was suddenly charged with a large responsibility in what constituted a real national emergency, and it was required with great speed to expand its hospital work enormously to meet the needs of the sick and disabled veterans.

Although the service activities are now limited to its own hospital system, it was necessary in the inception of this great work, in order to meet the enormous demands made upon it, to formulate a program which contemplated securing as rapidly as possible such hospital facilities as could be made immediately available. This was accomplished by making contracts with civilian hospitals all over the United States, by taking over from the Army, Navy or other governmental departments leases of hospitals or hospital projects which had been entered into during the war, by making use of certain temporary hospital facilities which had been constructed during the war by other departments, by making such extensions as were possible to its own plants, by purchasing certain other plants with such appropriations as were available and by leasing structures which could be readily and suitably adapted for hospital service in a short period of time.

This, of course, constituted a temporary program to meet immediate pressing necessities. In order to make more permanent arrangements, there was presented to Congress, during the winter of 1919-1920, a careful analysis of the entire situation, with suggested legislation appropriating sufficient funds for the construction of ample hospital facilities to meet the needs of this situation. On March 4, 1921, Congress appropriated a total of $18,600,000 for construction purposes. This money was placed under the control of the Secretary of the Treasury; it has been allotted through a special committee appointed by that official; and much of this construction is now in progress. The larger part of it concerns the extension of existing federal plants rather than the construction of new hospitals.

The care of patients in contract hospitals was some time ago transferred to the Veterans' Bureau. The Hospital Division, however, has continued to develop its own hospital system and at the present time maintains and operates a total of sixty-six hospitals with a bed capacity of nearly 21,000 for all classes of beneficiaries.

The entrance and administration building of the neuropsychiatric hospital at West Roxbury, Mass., is shown above. The hospital is leased from the city of Boston and has a capacity for 237 patients.



A former resort hotel at Biltmore, N. C., has been extensively remodelled and is now known as U. S. Public Health Service Hospital No. 45. It is a general hospital with a capacity for 353 patients.

The U. S. Public Health Service Hospital No. 62 at Augusta, Ga., is also a former resort hotel. It has been remodelled for hospital purposes and, although now leased, probably will be a permanent hospital. It has a capacity for 200 patients.

The hospitals are operated for three general classes of patients,—general medical and surgical, neuro-psychiatric and tuberculous,—and are located all over the United States. Arrangements also exist whereby there will be a still further increase in these hospitals during the next few months, although undoubtedly there will at the same time occur the closing of some. Many of them are unsatisfactory plants and are continued in operation only to meet the needs of the situation. They will be closed as rapidly as better facilities can be acquired.

A general hospital at Dwight, Ill., is known as U. S. Public Health Service Hospital No. 53. It is leased property of permanent construction with accommodations for 231 patients.

During the last fiscal year, which closed June 30, 1921, the Hospital Division, through its organization, treated in hospital 183,000 patients, of which 137,000 were veterans of the World War, giving to these beneficiaries a total of nearly 8,000,000 hospital relief days; also over 600,000 patients received dispensary care and relief and nearly 1,500,000 medical examinations were made and special services of various kinds were rendered to these patients, including dentistry.

Efforts have been made to develop this medical work to high standards of professional proficiency with the use of all modern medical scientific methods. Hospitals have been fully and completely equipped, supplied with ample professional personnel and every effort made to introduce high standards. The American Red Cross has supplied the functions of a medical social service. Occupational therapy and physiotherapy have not been neglected.

It is not easy at the present time to state with any definiteness just what the further developments in this work will be. The greatest needs are the development of more adequate and more satisfactory facilities for the care of mental and nervous disorders and for pulmonary tuberculosis. Undoubtedly this work will continue for a great many years to come, although its volume will probably decline. The policy of developing a good permanent system of hospitals for the care of veterans of the World War is now beyond a question paramount.

The tuberculosis hospital at New Haven, Conn., has a capacity of 500 patients. The main buildings (pictured above) are of permanent construction and additional ward space is provided in temporary structures.

A BRIEF SUMMARY OF THE YEAR IN THE LARGER MILITARY HOSPITALS

Prepared in the Office of the Surgeon General, War Department, Washington, D. C.

HOSPITALIZATION provided by and for the army in peace or war is divided into two main categories: the stationary or fixed establishments and the field or mobile units. In time of peace at home or abroad, and in the "zone of the interior" in time of war, two types of stationary establishments are maintained, station hospitals and general hospitals. Station hospitals are maintained at garrisoned posts, forts or cantonments and normally receive only the sick from the troops thereat, although in exceptional instances they meet the military needs of a larger area and in still other instances receive special cases of sickness from even a larger area. General hospitals are designed and maintained to serve the general and special needs of the military service as a whole rather than local needs although each general hospital cares for the casual cases that arise in its vicinity.

This brief summary deals with the general hospitals in the United States. The year preceding the one just passed saw the completion of the larger portion of the war work in military hospitals.* At the beginning of the year just passed (Oct. 1, 1920), there were nine large military hospitals doing general hospital work. Since that time two of these hospitals have been transferred to the Public Health Service, two converted into smaller station hospitals and one new general hospital has been opened at El Paso, Texas. So that today there remain six large hospitals (five general and one station) doing general work in the United States and caring for an average of over 3,000 sick—Walter Reed at Washington, D. C., doing the broadest kind of general work for the East as well as the casual work of troops in the vicinity; Letterman at San Francisco receiving many cases of tropical disease from our island possessions as well as general work from the West; Army and Navy General Hospital, Hot Springs, Ark., accepting a limited amount of general work from the Middle West as well as certain cases in which the local waters are beneficial; the Wm. Beaumont at El Paso and the station hospital at San Antonio in Texas doing a great deal of local casual work as well as the general work of the Southwest; and the Fitzsimons General Hospital at Denver, Colo., caring for tuberculosis only.

It has been the policy of the Surgeon General and of the War Department to assist in every way possible in the care of the discharged soldier who later as a consequence of his service requires hospital care and becomes a beneficiary of the Veterans' Bureau. This work has been carried on to the extent permitted by personnel and funds available to the Medical Department. Indeed at our larger hospitals (where only it can be accom-

The Letterman General Hospital, San Francisco, Cal.

*"The Year's Work in Military Hospitals and a Prospectus of the Future," by Major Floyd Kramer, Medical Corps, U. S. A., in The Military Surgeon for December, 1920.

plished in a proper manner) this work has assumed considerable proportions. Disregarding the casual cases above referred to as being treated in some of our general hospitals, about one-fourth of the sick cared for during the past year were discharged soldiers accepted from the Veterans' Bureau. In addition to this work much assistance has been rendered in making physical examinations for that bureau to determine the right to compensation or necessity for hospitalization. Over 3,000 of these examinations were made, many of which necessitated admission to hospital and thorough survey to establish diagnosis and physical condition.

A summary of the Veterans' Bureau cases treated during the year in our hospitals may be of interest. Four thousand three hundred cases were treated during the year October 1, 1920, to October 1, 1921. Of that number 180 or about four per cent were suffering from either nervous or mental conditions, 2,195 or about fifty-one per cent with tuberculosis, 770 or about eighteen per cent with disease or injury to the osseous system, seventy-five or nearly two per cent with heart or vascular system diseases and the remaining twenty-five per cent was made up of all other conditions combined. In this series disease, not injury, accounts for the major portion of all cases treated, as evidenced by the fact that eighty-one per cent were hospitalized for disease and nineteen per cent for injury, including gassing.

Of the cases of World War injury or disease among the active list of the existing army very few still remain under treatment—less than one

A perspective sketch of the completed Wm. Beaumont General Hospital, El Paso, Texas.

Airplane view of the Walter Reed General Hospital, Washington, D. C.

The Army and Navy General Hospital, Hot Springs, Ark.

hundred—but in this series the incidence of injury probably exceeds that of disease as about ninety per cent were treated for injury and disease of the osseous system alone.

The total number of all cases treated in our general hospitals during the year was approximately 30,000, of which probably one-third was local sick admitted from troops in the vicinity of the hospital and two-thirds bona fide general or special cases proper for general hospital care. Of this number nearly 4,000 cases received physiotherapy or some other form of so-called physical reconstruction and under this head nearly 400,000 treatments were given.

OBSERVES FIFTIETH ANNIVERSARY

Roosevelt Hospital of New York celebrated on November 2, the fiftieth anniversary of its foundation by James H. H. Roosevelt. Its establishment came about through the founder's own unfortunate experience with early medical practices. One hundred years ago the boy, James H. H. Roosevelt, the last of a certain branch of that illustrious family, became ill and the treatment prescribed for him was milk in which lead had been boiled. Because of this treatment the boy grew up and went through life a cripple, the result of lead poisoning.

That medicine and surgery might be developed for the benefit of the greatest possible number, James H. H. Roosevelt left his entire fortune of approximately one million dollars for the foundation and endowment of a hospital. From November 2, 1871, to the present time, Roosevelt Hospital has complied with the terms of the will. During that time it is said to have given more than half of its service free of charge. It has received more than 250,000 patients. In its dispensary have been received more than 1,000,000 patients and the average payment has been twenty-five cents a visit.

During that fifty-year period there has been scarcely a time when Roosevelt Hospital was not caring for a patient of national reputation. Col. Theodore Roosevelt was there three times for treatment, the last time at the beginning of the illness from which he died. It has been the hospital of persons of the widest possible extremes of financial condition, of the very poor who could pay nothing and of the rich to whom cost was of no consideration.

The institution has given to American medicine at least three great doctors, Dr. Francis Delafield, Dr. Charles McBurney and Dr. George Tuttle.

A continued interest in the hospital has been maintained by the Roosevelt family. The first president was James I. Roosevelt, cousin of the founder. He was succeeded by his nephew, James A. Roosevelt. William Emlen Roosevelt is president now; George E. Roosevelt is trustee; and Philip Roosevelt is treasurer.

The hospital property is valued at $1,500,000 and there are $2,000,000 in investments. At the present time it has 285 beds.

PENNSYLVANIA HOSPITAL ASSOCIATION ORGANIZED

Organization of the Pennsylvania Hospital Association took place on December 7 at a meeting of 100 hospital workers of that state at the Penn-Harris Hotel in Harrisburg. Officers were elected, a constitution and by-laws adopted and an interesting program of papers, addresses and discussions heard.

Daniel D. Test, superintenednt of the Pennsylvania Hospital at Philadelphia, was named president of the new state association. Other officers chosen include: Col. J. H. Bigger, superintendent of the Western Pennsylvania Hospital at Pittsburgh, and Dr. J. C. Biddle, superintendent of the State Hospital at Ashland, vice-presidents; treasurer, Elmer E. Matthews, superintendent of Wilkes-Barre City Hospital at Wilkes-Barre; trustees, Miss Margaret Cumming, superintendent of the Christian Buhl Hospital at Sharon, one year; John L. Burgan, superintendant of the State Hospital at Scranton, two years; Dr. John A. Drew, superintendent of Chester Hospital at Chester, three years; Miss Susan C. Francis, superintendent of Children's Hospital at Philadelphia, four years; and Dr. H. W. Mitchell, superintendent of the State Hospital at Warren, five years.

Mr. John N. Smith, superintendent of Hahnemann Hospital in Philadelphia, was chairman of the opening session, with Miss Cumming as secretary. After much discussion, indicating a keen interest in the future of the association, a constitution was adopted resembling most nearly the constitution of the Indiana Hospital Association. Officers were authorized to apply for admission to the American Hospital Association as a geographical section if in their judgment it was wise. The approval of the convention was also given National Hospital Day and the president was authorized to appoint a state chairman. The next meeting will be held in Harrisburg in the early summer. An executive secretary is to be selected soon by the trustees.

Mayor Hoverter of Harrisburg gave the address of welcome at the convention, which followed the formal opening of the meeting by Mr. Smith and delivering of the invocation by Dr. George W. Reese, superintendent of the Shamokin State Hospital at Shamokin.

Dr. Edward Martin, commissioner of health of Pennsylvania, addressed the afternoon session on the relation of public health to hospitals. The functions of the new Welfare Department of Pennsylvania were outlined by Dr. John M. Baldy, commissioner. Following the addresses was a lively round-table discussion.

WILL GIVE BED TREATMENT TO TUBERCULOUS

In the new individual room building of the Beth Israel Hospital of New York City, which has been planned and is in process of erection, bed treatment will be given to patients suffering with tuberculosis. Provision has also been made for the treatment of venereal disease patients in the building.

HOSPITAL ACTIVITIES OF U. S. NAVY DURING 1921

By R. M. KENNEDY, Rear Admiral, United States Navy, Washington, D. C.

ON DECEMBER 31, 1920, the hospital facilities of the United States Navy consisted of twenty-six hospitals, including six beyond the continental limits of the United States; these represented a combined capacity of 10,119 beds, exclusive of those at dispensaries, sick quarters, sick bays on board vessels and on hospital ships. There were actually attached to these hospitals 241 medical officers, 13 dental officers, 70 pharmacists, 390 nurses and 1,572 hospital corpsmen.

With the decision of the Veterans' Bureau to abandon civilian hospitals and to utilize government operated institutions, hospital activities of the United States Navy will be placed on a basis equivalent to or greater than that of war time.

During 1921 the hospital ships, Solace and Comfort, were placed out of commission. The Mercy remains attached to the Pacific fleet, and the newly launched Relief has been assigned to the Atlantic fleet.

Notable in the field of hospital construction is the work being pushed on the naval hospital at San Diego, Cal., for which $750,000 has been expended and for the expansion of which an additional $500,000 has just recently been appropriated.

At this time there were three hospital ships in commission, the Comfort, Mercy and Solace, representing a combined bed capacity of 813, with a total personal staff of twenty medical officers, three dental officers, eight pharmacists, five nurses, and 280 hospital corpsmen. The Comfort and Mercy were based on the Pacific Coast, and the Solace on the Atlantic Coast. These ships were well equipped in every respect as mobile hospitals to meet the needs not only of great fleets but of the smaller and isolated shore stations not provided with ample hospital facilities. As they also carried large quantities of medical and surgical supplies, they were utilized in emergencies as supply ships for the various medical department activities ashore and afloat.

During the early part of the year, the hospital ship Relief, provided with every facility afforded a class "A" hospital ashore, and built specifically for such a purpose, was placed in commission, and assigned for duty with the Atlantic fleet. It has a bed capacity of 500 and is provided with a staff of nine medical officers, one dental officer, three pharmacists, eleven nurses and 138 hospital corpsmen.

On Vessel With Each Fleet

About the same time, the Solace and Comfort were placed out of commission, thus affording only one hospital ship for each of the two great fleets. It is believed this arrangement will meet strictly normal needs, provided the fleets are not further subdivided, and provided that no unforeseen contingencies arise.

The care of Veterans' Bureau patients has occupied the serious attention of the Bureau of Medicine and Surgery, and conferences are being held frequently with the representatives of that bureau with a view to providing beds for its beneficiaries.

By direction of the president, there has been established a Federal Board of Hospitalization for the purpose of coordinating the separate hospitalization activities of the Medical Department of the Army, Bureau of Medicine and Surgery of the Navy, the Public Health Service, St. Elizabeth's Hospital for the Insane, Washington, D. C., the National Home for Disabled Volunteer Soldiers, the office of the Commissioner of Indian Affairs and the United States Veterans' Bureau.

There has accordingly been organized a Federal Board of Hospitalization, composed of the following officials: General Sawyer, U. S. A., president of the board, appointed by the president as chief coordinator; the Surgeon General of the Army; the Surgeon General of the Navy, the Surgeon General of the Public Health Service; the superintendent of St. Elizabeth's Hospital; the president, board of managers, National Home for Disabled Volunteer Soldiers; the Commissioner of Indian Affairs, and the director of the United States Veterans' Bureau.

Duties of Federal Board

It is the duty of the Board:

(a) To consider all questions relative to the coordination of hospitalization of the departments represented.

(b) To standardize requirements, to expedite the inter-department use of existing government facilities, and to eliminate duplication in the purchase of supplies and the erection of buildings.

(c) To formulate plans designed to knit together in proper coordination the activities of the several departments and establishments with a view to safeguarding the interests of the government and to increasing the usefulness and

efficiency of the several organizations and to report to the president thereon.

It is understood that the Veterans' Bureau has decided to abandon, so far as possible, civilian hospitals for the care of its patients and to make the fullest practical use of government owned and operated hospitals. Plans are being perfected whereby every bed that may safely be allowed after the interests of the navy have been conserved, will be utilized by the Veterans' Bureau. The practical results of this will be to increase naval hospital activities greatly and to place them on a basis equivalent to or greater than that of war time. This will obviously require a great increase in all branches of the medical department personnel of the navy, incident to this great expansion, which will be imperative for successful operation and a happy and satisfactory issue.

Numerous Transfers Made

On May 13, 1921, the naval hospital at Gulfport, Miss., completely equipped, was transferred to the Treasury Department for use in caring for the veterans of the World War.

By order of the president of the United States, the Naval Hospital at Fort Lyons (Las Animas), Colo., was transferred to the Veterans' Bureau, October 31, 1921. The present staff, by direction of the president, will remain indefinitely and will continue to operate the hospital for the benefit of the Veterans' Bureau. As this institution was the only naval hospital set aside for the exclusive treatment of tuberculosis cases, arrangements have been made with the surgeon general's office of the army for the transfer of naval patients from Fort Lyons to the Fitzsimons General Hospital (U. S. Army), Denver, Colo., and for the reception of current cases of tuberculosis occurring, hereafter, within the naval service.

On September 10, by direction of the president, that part of the Naval Hospital at Great Lakes, Ill., known as Camp Ross, was set aside for use as a veterans' psychopathic hospital to be operated by naval personnel. On September 15, the Naval Hospital at New Orleans, La., completely equipped, was delivered to the Public Health Service for use of the Veterans' Bureau patients.

New Hospital Under Construction

On June 30, the Naval Hospital at Naval Operating Base, Hampton Roads, Va., was placed out of commission, and all hospital activities in that region are now centered in the Naval Hospital, Norfolk, Va., a beautifully equipped and modern institution.

There is now being erected at San Diego, Cal., a naval hospital ultimately to care for about 800 patients or more. The present work comprises an administration building, two ward buildings, an operating pavilion, a subsistence building and power house at a cost of $750,000, providing a capacity of 150 beds. There has been an additional $500,000 appropriated for increasing the hospital capacity.

On October 21, 1921, there were twenty-two hospitals in full commission, including six beyond the continental limits of the United States, representing a total bed capacity of about 8,283 beds. Attached to these hospitals are 245 medical officers, 19 dental officers, 65 pharmacists, 404 nurses and 1,530 hospital corpsmen.

BELGIAN ARCHITECT GIVES OPINION OF U. S. HOSPITALS

M. J. B. Dewin, one of the recent visitors to the United States from Belgium as a guest of the Rockefeller Foundation, has been appointed by the city of Brussels as architect for the new hospital of St. Pierre, a public hospital to be used as the teaching hospital of the medical school of the University of Brussels. He has also been appointed architect of the laboratories to be built on the same site. Mr. Dewin has built the Cavell-Depage nurses' training building in Brussels and the Red Cross hospital and clinic, as well as a number of private clinics for leading medical and surgical men in Brussels. He comes to this country to study recent types of medical laboratory and hospital construction before developing his own plans.

M. Dewin, in his study of hospital construction, was impressed with certain essential differences between American and European institutions.

"During my trip," he said, "I noticed that the buildings of the older hospitals are spread out over a large area. At the present time, however, due to the high price of land and building materials, this system is extremely costly, and there is a marked tendency to concentrate all departments as far as possible into a limited space and a restricted number of buildings, increasing their height to make up for reduced area.

"Great technical difficulties are involved, however, in making this change, particularly as regards arrangement of the corridors, lighting, ventilation, etc. These problems have not yet been solved anywhere with absolute finality, but in the newer hospitals they have been carefully studied and remarkable progress has been made.

"In Belgium, where buildings are limited by law to a very moderate height and where, as in America, building and maintenance expenses have increased considerably since the war, a compromise solution must be adopted.

"In the United States the problem is complicated by the fact that the high development of administrative organization and specialization of the technical departments require a much greater number of rooms than we are accustomed to see in European hospitals. One cannot help admiring the ingenuity with which this difficulty has been met here by solutions which are as practical as they are economical. The dispensaries, especially, have been planned in quite a remarkable way.

"As concerns equipment, the differences between European and American hospitals are less marked. Material progress spreads so rapidly throughout the world in our day that the same installation is found nearly everywhere, depending only on the financial means of the institution."

A VIEW OF THE BUILDING SITUATION IN 1921

By RICHARD E. SCHMIDT, F.A.I.A., Chicago

The public is going to step into the hospital construction field, unless its cry for more beds is heeded, and demand the extinction of many small hospitals in the larger cities in which duplication of management might be avoided and overhead expenses reduced by consolidation, says Mr. Richard E. Schmidt of a Chicago firm of architects in the accompanying article. The building boom, falsely predicted for 1921, is near at hand, Mr. Schmidt believes, but it finds stocks of building materials on hand very low. Hospital boards, if they are wise, will be prepared with plans and specifications to place contracts the moment building conditions become propitious, he declares with emphasis.

IN 1920 the cost of building a fireproof hospital of average arrangement and facilities was approximately seventy cents per cubic foot; in the midsummer of 1921 this had fallen to about sixty cents. At present, construction costs average about fifty-five cents. Fifty cents per cubic foot will probably be the lowest price reached for a long time, and it seems not at all likely that the price of thirty cents per cubic foot, which prevailed eight or ten years ago, will again be reached for many years, if ever. Only a reduction in freight rates and labor costs and a standardization of products will make possible an approach to such low prices.

The representatives of many building interests have appointed committees to study the standardization of their respective products. It seems desirable that committees of the American Hospital Association, such as the one headed by Mr. Frank E. Chapman on floors, and the committee on standardization of the American College of Surgeons, find it impossible to submit their findings to some body which would act as a clearing house so that some solution of this difficult problem might be reached.

Obviously it is impossible in a review of hospital construction to enumerate all of the institutions which have been opened in 1921 or which are in course of construction, but there has been considerable building activity. Among those completed in the year are the 1,000-bed Edward Hines Jr. Hospital of the Public Health Service at Broadview, Ill.; a large addition to Evanston Hospital, Evanston, Ill.; the first section of the Southern Baptist Sanatorium, El Paso, Texas; an addition to the maternity department of Grant Hospital, Chicago; Misericordia Home, Chicago, with a capacity of 45 adult and 90 infant patients; Charles T. Miller Hospital, St. Paul, Minn., with 216 patients beds; and the Babies and Children's Hospital, Cleveland.

Among the projects now under construction are the $2,000,000.00 Research Hospital of the State of Illinois in Chicago; Saginaw General Hospital, Saginaw, Mich.; Methodist Episcopal Hospital, Gary, Ind.; Jane Lamb Memorial Hospital, Clinton, Iowa.

Projects which will be under way in 1922 include a magnificent Jewish Hospital in St. Louis; a Jewish Hospital in Memphis; St. Luke's Hospital in Duluth; and the Shriners' Hospital for Crippled Children in St. Louis. The decision of the Shriners to establish shortly nine hospitals in St. Louis, Montreal, San Francisco, Twin Cities, Shreveport, Portland, Ore., Dallas and other cities, and the decision of the Rotarians on a program for the caring of crippled children are noteworthy indications of the new trend of such organizations to turn large funds into an humanitarian channel.

The Public Health Service has announced a building program of nine new hospitals to accommodate more than 3,000 patients. Three of these, one each in Iowa, Montana, and Oregon, are to be in operation in 1922. Many large industrial plants have been holding off their hospital programs, but will undoubtedly proceed as soon as their factories are again operating at full capacity.

St. Mary's Hospital, Saginaw, is planning to begin a 100-bed addition in 1922.

Nurses Homes Given Attention

Trustees of Rockaway Beach Hospital have announced their intention of building a seventy-five-bed addition to their hospital.

The fact that nurses must be properly housed is finding greater recognition, and hardly an important hospital is now being planned without preparations for the simultaneous erection of an appropriate nurses' home. Among these are: Saginaw General Hospital; St. Luke's Hospital, Duluth; and Michael Reese Hospital of Chicago; the latter will soon begin one of the most modern developments of this class of building for the housing of its 200 nurses.

Although the building situation in 1921 has been an improvement over that of 1920, the long

expected building boom did not materialize, and the demand for more beds which has existed has increased. The boom may not be immediate, but it is certainly near at hand.

Reduced costs have not helped many hospitals to build, inasmuch as their funds in many instances are in securities which now have a lower face value than when the subscriptions were made. In most cases it is difficult to obtain new subscriptions, because merchants and wealthy persons have postponed their gifts on account of losses sustained in liquidating stocks and reductions in their incomes. The wish of the sick to be treated in a hospital when treatment is required, however, is now so well established that families will sacrifice all luxuries to give their sick hospital treatment. This feeling has been growing in an increasing ratio and consequently has greatly augumented the demand for beds.

Public Will Ask Consolidation

The cry for more beds is heard everywhere, and without question it will be met in time. If it is not met by the existing order of hospitals, the public will ask why, and will probably take steps to learn about costs of management and operation, thus disclosing the greatly varying costs per patient.

Many persons believe that the high cost of operation in some institutions is due to poor management. They see many small hospitals with duplication of management and overhead that could be reduced if several were combined and operated as a unit. They will probably dispose of some of the small institutions and rebuild larger ones on new sites, if it is left to them.

Successful business men and manufacturers do not hesitate to scrap small and uneconomical machines, or to do away with a number of small plants so that they may manufacture economically in a new large plant equipped with new machinery. Such men of affairs may have in mind a similar criticism of the many hospitals in large cities and they might willingly part with some of their wealth if they were convinced that the boards of a number of small hospitals were willing to abandon petty jealousies and titles and combine their institutions.

Recent developments indicate that real estate operators and doctors are becoming aware of such waste and believe that individual room hospitals of 350 to 500 beds can be operated without a loss and even at a possible profit. In giving consideration to such schemes the question naturally arises as to whether such hospitals will be operated with the same humane care for the patient as generally prevails in the older order of organizations, or whether the treatment of patients will fall to that level which formerly prevailed in some municipal hospitals where a patient was nothing more than so much material.

It is not generally known that stocks of building materials on hand in yards and in warehouses are extremely low and that in many cases there are none. When, on account of high prices, the public stopped building, the manufacturer shut down his works, either wholly or to a small percentage of production, his reason being the same as that of the building public. Instead of putting his capital into a finished product which might lie unsold for a long time or which would have to be sold at a loss to compete with material manufactured on a lower wage scale, he used what little capital he had left in rehabilitating his plant and increasing it here and there, looking forward to a boom. The boom did not arrive when expected, his capital is now in frozen credits, and he cannot borrow; consequently he is not laying up stocks.

If the manufacturer does not receive enough orders to cause him to think that construction will be undertaken in sufficient volume to warrant building up his stocks, he will not be in a position to fill may or all orders when projects are put on the market; that is, if a fair sized boom were to begin.

Hospital furniture of all kinds and other equipment can now be obtained at fairly low prices approaching those of 1914. Many of the mills have no stocks, others are behind in orders, and it does not seem likely that the present prices will hold if many orders are received. In this regard the equipment market is identical with that of the building material market.

Hospitals, which have good prospects for obtaining the necessary funds for building, cannot be urged too strongly to be prepared to place contracts with builders immediately after conditions become propitious.

Such preparedness can only be had by having complete plans and specifications in readiness to place on the building market for proposals at a moment's notice. A thoroughly intelligent and satisfactory study of almost any building problem requires from four to twelve weeks, depending upon the magnitude of the project, and the development of working plans and specifications requires almost the same amount of time, so that it is hardly possible to ask for proposals in less than from two to six months from the time a hospital board may have decided to have plans made. Documents made in a shorter time are likely to be incomplete and to lead to extras and disputes, both of which rob building of the pleasure and satisfaction of a new or enlarged home.

HOSPITAL ADMINISTRATION DURING 1921

By A. C. BACHMEYER, M.D., Superintendent, Cincinnati General Hospital, Cincinnati, Ohio

In his analysis of the administrative problems, conditions, achievements and needs of American hospitals during 1921, Dr. Bachmeyer gives space to the following: (1) Favorable receipt of report on hospital records of American Hospital Association committee; (2) formulation of comprehensive building programs by many hospitals following slight reduction in construction costs; (3) retention of war wage scale in spite of present labor surplus; (4) slightly decreased cost of hospital operation but increase of free patients; (5) adoption by Ohio State Industrial Commission of "service at cost" policy in relation to hospital care; (6) presence of many foreign delegations to study American administration; (7) need of teamwork between executive and employees.

DOES looking backward pay? It may well be questioned, unless there is definite purpose in our review. What has been done? Whither are we tending? What of the program for the future? If we can obtain answers to these and many other questions, then a review or analysis is justified.

Hospital administration has become a specialized field of endeavor. The pages of history pertaining to its growth and development are exceedingly interesting. The story is inseparably connected not only with that of the development of the medical sciences but also with the history of the great advances made in construction, manufacture, commerce and other related fields. The demands made upon the administrator today, even in the smaller institutions, have become so numerous and complex that few executives have the time or inclination to review the events leading up to the present situation. The number of those who realize the multiple and complex problems and, in consequence, the requirements of the hospital executive, is rapidly increasing. The need for men and women trained to serve as administrators of our institutions is steadily growing more acute.

One of the outstanding features of the year 1920 was the organization of a committee, under the auspices of the Rockefeller Foundation, to study the situation and make a report upon the practicability of training executives by means of a definite course of study. That committee is still at work and its report is awaited with great anticipation. Financial difficulties have prevented the further development of training courses established at Cincinnati and elsewhere. It remains a fond hope that something definite and constructive will soon be forthcoming.

The efforts of various national organizations to improve hospital efficiency, particularly the standardization program of the American College of Surgeons, are proving increasingly effective. While in some instances these efforts seem to have lost much of their initial momentum, the institutions they sought to improve have been awakened and are themselves seeking to increase their efficiency. The success with which they are meeting is very gratifying.

One of the outstanding events of the past year was the presentation of a report by a special committee of the American Hospital Association pertaining to hospital records and record keeping. This report sought to present to the hospitals of the country in concrete form, a set of principles, definitions and methods of recording the various phases of institutional activity, which would serve as a guide and which would promote uniformity in record keeping throughout the nation. The report was formally adopted at the September convention of the association. Copies of it, together with a portfolio of suggested forms, have been sent to a majority of the hospitals. The response and comment has been very favorable, as has been the comment from a number of accounting and auditing firms. The installation of this system in hospitals will do much toward improving hospital practice and will enable them to make a comparison of their activities that is not now possible. The committee's work is far from complete and next year should witness further contributions along similar lines.

Building Programs Being Formulated

The readjustments being made in the general economic situation have had their effect on hospitals. Material and supply costs, having undergone certain reductions, have enabled many institutions to operate at slightly reduced costs and have enabled others to undertake building and extension programs that were long held in abeyance.

The need for more hospital beds has grown very acute in many sections of the country. Comprehensive building programs are being formulated in various states and sections and in a number of places actual construction is under way.

The present indications are that much more progress in this direction can be expected during 1922 than was possible during the past year.

A remarkable change was noted in the labor situation. During the early months of 1921 the labor shortage continued, but beginning in the early summer and continuing and increasing throughout the remainder of the year, the country was confronted by an unemployment problem that demanded national attention. While the labor situation has thus been relieved and there is now no difficulty in securing employees, this is mainly true of the unskilled class of workers. There is still a need for more trained professional workers, such as technicians and assistants. Again, while there has been some reduction in the wages paid labor, the scale has not been reduced to the pre-war basis and it is to be hoped that hospitals will never return to those old and utterly indefensible salary and wage schedules. The work of our menial employees is just as difficult and more hazardous, if anything, than that of those in similar positions in industry, and it was entirely unfair to pay a rate of wages that was one-third or more under the industrial scale.

Methods of Financing Institutions

The financial situation has been just as acute as ever. Many whirlwind campaigns failed to accomplish the desired results. While this method of raising funds became a national habit during the war, the public seems to have tired of it; not so much of the method as it has of the multiplicity of appeals made.

Hospitals as well as other activities, of necessity, have therefore endeavored to find other means of financial aid. For some, the employment of the full-time financial secretary has proved successful. Others, believing in the value of the whirlwind campaign provided too many such campaigns are not conducted during the year, have joined with the other charitable agencies in their community in raising a so-called Community Chest and have subsequently drawn their support from it. This method of organized giving has its appeal to the philanthropic citizen and in a number of cities is proving very successful.

While the cost of operation has increased during the last four or five years at a rather rapid rate, there was at the same time an increase in the number of patients who were able to pay the hospital charges and a proportionate decrease in the number of free cases. During the year this situation has changed. While costs have decreased but slightly, we have in many instances experienced a change in the proportion of pay and part-pay to free patients. This necessitates an increase in the financial support of the institution from sources other than earnings and has created many serious problems.

No Reduction in Rates

Many institutions have repeatedly revised their scale of room and service rates during the past several years. None, within the knowledge of the writer, have found it possible to make any reduction in those rates up to the present time. In a large number of instances inquiry elicits the information that the rates in force are purely arbitrary and the result of precedent and custom. The lack of definite knowledge of operation costs prohibits the determination of service charges upon any accurate or business-like basis. The need of such basis is therefore very evident. A careful study of operative costs and consequent adjustment of service charges would in all probability prove a profitable venture for many institutions.

Attention has been repeatedly directed to the fact that two groups of patients can obtain competent and adequate medical service today. The one, represented by the wealthy, can purchase such service if it so desires. The other, represented by the indigent citizen, is in many instances provided with the best of medical care by the community. But the great bulk of our citizenry, who under ordinary circumstances are self-supporting and able to pay for the necessities and perhaps some of the conveniences and comforts of life, find themselves unable to cope financially with the burdens imposed by sickness or injury. Being self-respecting and shunning charity, they find themselves forced in many instances to do without adequate and competent medical service. This situation brings us face to face with a problem the solution of which is becoming more and more imperative. Something should and must be done to provide hospital accommodations and service for this great group of deserving people. Whether the answer will come through some method of administration that will reduce operative costs to a point where it will be within their means or whether through some scheme of health insurance their needs will be served is not now apparent. The situation presents a task for the best minds in the country.

Policy of Ohio Industrial Commission

Hospitals in many states having state industrial accident insurance have often been dissatisfied with the rates paid by the state authorities for the hospital service rendered their beneficiaries. One of the prominent features of the past year was the adoption, after one year of trial, by the industrial commission of Ohio of the policy of "service at cost." Having served the commis-

sion under an arbitrary rate scale for a number of years with great dissatisfaction, the hospitals of Ohio were happy to aid that body in solving the rather difficult problem of satisfactorily adjusting the rate. The commission realized that its arbitrary scale was unfair to the hospitals and that it was, in practice, requiring them to subsidize industry. The hospitals realized that they could not expect the commission, being a state agency, to pay them a profit for the services rendered. Therefore a plan was evolved whereby the state industrial commission makes a separate contract with each hospital accepting its patients, upon the basis of the "daily per capita cost." This figure is determined from the annual report filed by each hospital with the state board of health, which report contains an itemization of the cost of operation. Provision has also been made for the evaluation of contributed or donated service, a large item in many sectarian institutions. It is the consensus of opinion among the Ohio hospitals that this action on the part of the state industrial commission marks a definite advance in this field.

A number of delegations from foreign countries have visited America this year to study methods of administration and medical education with the hope that some of them could be utilized to advantage. All of these delegations expressed themselves as being highly pleased with what they saw and voiced the opinion that many of our methods were applicable to their situations. This is a reversal of the old order of affairs. It indicates that America has taken the lead in this field as in many other fields of endeavor. We must not rest upon our laurels, however, but by hard and earnest efforts seek to promote the best methods in hospital operation and to strengthen our position as leaders in matters pertaining to the public health.

Need of Team Work Emphasized

In these troublous times, when the whole world is endeavoring to readjust itself, the need of teamwork and cooperation is particularly emphasized. Now as never before the need of this spirit is felt in all enterprises. In the materialistic times it is incumbent upon us as executives to ever hold before the eyes of all of our hospital attachés, from trustee to most menial employee, the ideal of Service. The personnel of each institution must be brought to look upon itself as a unit in performing the function of the hospital. That function is ordinarily said to be "the care of the sick" and it is not difficult to make our professional workers, physicians and nurses, see the part they play in this activity. We must do our utmost to imbue all other employees, particularly those who do not come into direct contact with the patient, with the same ideal. If properly approached, their reaction is often surprising and team play and cooperation are readily developed.

The year 1921 has gone, its lessons have been many and considerable progress has been made. The new year is before us. Let us show by our efforts and results during the coming year that we know whither we are tending so that the tremendous potential power for good inherent in hospitals of the country may make itself felt in the progress and upbuilding of the nation.

PUBLIC HEALTH INSTITUTES SCHEDULED

The United States Public Health Service, with the cooperation of state boards of health, has arranged a series of twenty-one public health institutes to be held during the first half of 1922 in various cities throughout the country.

The institutes will be one-week schools and are designed to bring health officers, private practitioners, nurses, educators, heads of institutions, social workers and others concerned in the public health field together for a consideration of the newer aspects of public health work. They are aimed to provide opportunity for workers to meet leading specialists in the various fields, to make public health work in the various communities more effective and the continued progress of the movement more certain.

Except in Chicago where the courses will deal only with venereal disease control and in Pittsburgh where venereal diseases and industrial hygiene will be considered, the institutes will consist of from three to six lectures on the following subjects: Tuberculosis, child hygiene, nutrition in health and disease, the management of clinics and health centers, the general communicable diseases, the noncommunicable diseases, industrial hygiene, sanitary engineering, administrative problems, mental hygiene, medical social work, syphilis, gonorrhea, protective social work, and the delinquent. The faculty will consist of several hundred workers in the general and special fields of public health work in the nation.

Institutes have been scheduled in the following cities beginning with January 9: New Orleans, Columbia, Dallas, Birmingham, Memphis, Louisville, Indianapolis, Pittsburgh, Jacksonville, Detroit, Chicago, Minneapolis, Atlanta, Portland, Kansas City, Spokane, Newark, Albany, Denver, Washington, D. C., Hartford.

NEEDS OF NEW YORK CITY

Miss Mollie E. Sinclair, supervisor of the admission department of the Burke Foundation, White Plains, New York, made a study through the Sturgis Research Fund of the convalescent provision and needs of New York City. The purposes of the study were to determine the most perssing convalescent needs, and how to aid in filling them, either by the addition of new homes or through readjustments and better coordinations in the existing organization The findings of this investigation are embodied in a little pamphlet reprinted from *Hospital Social Service*, 1921, Vol. 377, which gives some interesting and valuable information. The needs are taken up according to the types of service: as nervous and mental borderlines, older boys, colored people, those affected with lung or heart trouble, etc.

A FEW OF THE 1921 NURSES' HOMES

Western Hospital
Montreal, Que.

Swedish Hospital
Minneapolis, Minn.

Mobile Infirmary
Mobile, Ala.

St. Michael's Hospital
Toronto, Ont.

Grady Hospital
Atlanta, Ga.

Grandview Hospital
LaCrosse, Wis.

Frances Ann Lutcher
Hospital
Orange, Texas

1921 ACTIVITIES IN RED CROSS NURSING FIELD

By MISS CLARA D. NOYES, National Director, American Red Cross Nursing Service, Washington

"MAKING health contagious instead of disease" has continued to be one of the objectives of the American Red Cross during the past twelve months. It need hardly be suggested that the success of this type of work rests largely upon the nursing service.

Perhaps never before has a whole nation been made so actively conscious of the necessity for improving community hygiene as during the year just completed. The subject of health conservation and disease prevention has been brought definitely to the attention through the Red Cross Public Health Nursing Service of many rural sections of the United States which otherwise might have continued indefinitely without this service. The practicability of building for health, of thinking of health in terms of prevention rather than of cure, and of conserving the child health of the nation by early approach to the expectant mother and by follow-up work among infants and school children has been demonstrated incisively and comprehensively in the most inaccessible mountain hamlets no less than in the tenement houses of the city slums. Public officials and private citizens are awake to the importance of health and hygiene as the most indispensable "safety first" measure in the body politic, and a new concept of health and welfare problems has been visualized in every state in the union as well as throughout our island possessions.

Two factors have contributed to the success of the national health program, as participated in by the American Red Cross: The public health nurse and the classes in home hygiene and care of the sick. The "student nurse recruiting movement" financed substantially by the American Red Cross will ultimately increase the number of nurses available for all types of service. It is scarcely necessary to point out that hand in hand with the expansion of nursing service must go the recruiting of new disciples to carry on the crusade against man's age-long enemies, ignorance, dirt and disease.

THE YEAR'S HEALTH PROGRAM

1921 has been an active year for the American Red Cross Nursing Service in "making health contagious instead of disease." The two chief contributing factors in the success of its health program have been the public health nurse and the classes conducted in home hygiene and care of the sick. The public health nurse has rendered incalculable service in rural districts. Classes in home hygiene have been conducted in city and country, in foreign quarters and in institutions of correction. The Red Cross nurse has performed indispensable service at the scene of various disasters, notably the Pueblo, Colo., flood.

It is not too much to assert that the American Red Cross Nursing Service constitutes the greatest coordinating, registering and distributing agency for the nursing profession in the world. Its mobilization of 20,000 enrolled Red Cross nurses for active service during the world war is a witness to this claim. The present enrollment is nearly 38,000 nurses, the flower of the profession. This enrollment is maintained through the 221 committees of nurse volunteers, representing a total of 1,490. Of these committees 48 are state, 168 local and five foreign.

Moreover the Red Cross is continuing to recommend nurses to the Army, the Navy and the United States Public Health Service Hospitals for the care of disabled ex-service men. On July 1, 1921, there were 1,163 Red Cross nurses serving with the Public Health Service. Aside from these federal responsibilities the Red Cross Nursing Service has furnished 1,335 public health nurses to Red Cross chapters giving health instruction and definite nursing service throughout the rural communities of the United States. It has authorized 1,726 trained instructors to teach courses in home hygiene and care of the sick classes and is in close touch with the various nursing associations, the representatives of each of the three national nursing associations serving upon the national committee of Red Cross Nursing Service and advising upon all questions of professional standards and matters that relate to nursing in general.

Is Rounding Up Ex-Service Men

Inasmuch as the first duty of the American Red Cross is to those who pledged all in the defense of democracy, it is but fitting to outline at this point the past year's record in fulfilling this obligation to our soldier heroes—women as well as men. While practically every department of the nation-wide Red Cross organization was represented in the "clean-up campaign" instituted by the Veterans' Bureau, in which the American Legion cooperated with the Red Cross, the nurse,

by the very nature of things, is in an ideally strategic position to facilitate the rounding-up of these ex-service men and women who are eligible to compensation. With the Veterans' Bureau at the present time 157 Red Cross nurses are serving. Four of our division directors of nursing are also serving as consultants to the Veterans' Bureau.

Throughout the country are unreported cases of soldiers and nurses entitled to hospital care and compensation, who have not yet put in such claims. The Red Cross nurse, through her intimate contacts with family life, is admirably equipped to assist Uncle Sam in bringing to these disabled heroes and heroines the cheering news that will help them to overcome their disabilities. Often those eligible to vocational training believe the obstacles in the way of their acceptance of such education to be insurmountable. Frequently —especially in the case of disabled nurses—they do not understand that they are entitled to compensation during the time they are receiving instruction. The problems of their families and relatives often obtrude, discouraging them from taking advantage of vocational opportunities. The nurse, who so thoroughly and sympathetically understands the situation, has been a veritable harbinger of good tidings in persuading these doubting ones that the way of wisdom, as well as of justice, points to the acceptance of the governmental offers of assistance. In one of the divisions a canvass has just been completed, the nurses themselves making the survey, to ascertain how many such cases exist in that particular area.

One of the most constructive contributions made by the American Red Cross to the American people, especially in rural districts, has been the Red Cross public health nurses. The public health nurse is very literally the pioneer of the new empire builders who would make every man, woman and child, forever free and equal in the priceless privileges of health and right living. In every state of the union the Red Cross public health nurse today is preaching the gospel of good health for one and all. Every form of nursing has been carried on by these brave and often lonely warriors against disease and ignorance, their imaginations fired by the infinite possibilities for original, effective and intensely human service and their capacity for overcoming hardships matched only by their incomparable faith in the potency of education and health preparedness to conquer the forces of evil.

The Conference of State and Territorial Health Authorities and the American Red Cross came to a definite agreement concerning the general principles which govern the relation, as developed by the Red Cross, of public health nursing to state departments of health. Working agreements between the Red Cross divisions and the state departments of health, based on these principles, are in operation in a majority of the states.

Scope of Public Health Nursing

In some instances the local chapter has so effectively demonstrated the efficacy of public health nursing that the public authorities have assumed partial or complete financial responsibility. In communities where the entire expense is now met by taxes, the direction of the work passes from the hands of the chapters into those of the county commissioners or other public officials. This taking over of the work by towns and counties as responsibility and interest are developed proceeds constantly and is in consonance with the fixed Red Cross policy.

Every form of public health work has been carried on by the Red Cross Nursing Service. School nursing has been an all important factor in the more sparsely settled communities. Often this phase of the work includes the organization and operation of clinics under local medical direction for school children for the correction of defects in eyes and teeth and the excision of diseased tonsils and adenoids. Frequently all the medical nursing resources of the community are mobilized and utilized in making these clinics successful.

Prenatal and baby clinics, means of safeguarding the health of mother and child, are being conducted by the Red Cross throughout the country. Nursing care of the sick and maternity work are carried on by visiting nurses and county district nurses sometimes entirely—sometimes partly—supported by the American Red Cross.

Instruction in the control of communicable disease and tuberculosis and improvement of household and community sanitation are parts of the duties of every public health nurse. Underlying every activity and inseparably linked with every part of the public health program is the persistent teaching of hygiene and health habits, better care of the sick, child welfare work and better living conditions through practice and precept, through demonstration and illustration and through personal advice.

It should be remembered that it is the Red Cross Nursing Service which has blazed the way to a more general interest in rural nursing. Heretofore interest was largely directed toward city work and only a few nurses had caught the vision of the great opportunities awaiting them outside the large centers. Today rural public nursing is a vital interest and nurses by the hundreds are flocking into it.

Courses in Home Hygiene

Possibly no phase of the Red Cross Health program has so immediately and directly raised the standards of community efficiency and welfare as the instruction in home hygiene and care of the sick. The object of this course is to give elementary instruction in personal hygiene and household sanitation, to provide authentic teaching on simple nursing procedures, and to enlighten our young women and girls on the care of small children and babies. This course, however, is not as has been sometimes construed, a preparation for the actual practice of nursing as a means of livelihood. Its aim is rather to give to the average woman a better understanding of the rudiments of nursing procedure and the principles underlying disease so that she may more intelligently cope with minor illnesses in her own home. The more general this instruction in home hygiene and care of the sick becomes, the more will the demand for graduate nurses to care for minor illnesses decrease. The more ready, also, will the average wife and mother be to cooperate with the public health nurse in her community health work. All instructors in this course are urged to emphasize to every class these definite aims and accomplishments. Another important phase of this instruction is the teaching how to improvise sick room appliances and bedside comforts easily made at home at small cost.

The enormous gains made during the past year by these classes are eloquent indices of their popularity with the American public. An increase of more than 300 per cent is shown in the figures for the twelve months ending July 1, 1920. During that period 92,093 women and girls completed the course and were given certificates. Thousands more took the course, benefiting vastly by the lessons, but did not compete for the certificates. These courses call for no elaborate equipment and are given at a cost that brings them within reach of the most slender purse. Their service does not end with the pupil's own family. Through her enlightenment as to the principles of sanitation and nursing she soon extends her interest to the community at large and sees all life in a broader and more altruistic perspective.

Vocational Stimulus in Classes

An enormous vocational stimulus also resides in these classes. More than one young woman, as she has gone about the task of turning a sheet in regulation hospital style or bound a bandage upon the stark limbs of a demonstration infant, has had her eyes opened to the rich possibilities for service that await the graduate nurse today and has decided to enter a school of nursing. One Red Cross division director of nursing has reported one hundred and twenty young women to enter the profession as a result of courses in home hygiene and care of the sick; another records sixty.

Americanization possibilities presented by these classes are incalculable. Once the foreign-born mother has been induced to attend an elementary class a long step has been taken toward bridging the gap that the alien finds all too frequently in our crowded settlements between the customs and creeds of the old world and the new.

The textbook, "Home Hygiene and Care of the Sick," stands as a recognized authority and has been translated up to the present time in toto or in part into Czecho-Slovakian, Japanese, Korean, Russian and Polish while in the Dominican Republic a devoted instructor, Mrs. Isabel Hall de Basden, herself a graduate of an American school of nursing and one of the first native "home defense nurses" in that country, has translated the book, lesson by lesson, as she laid down for the benefit of her countrywomen the principles of home sanitation and personal hygiene. Mrs. De-Basden's translations, however, have not as yet been published. Steps may also be taken toward translating the textbook into Braille, in order that other communities may follow the inspiring example set by the Louisville (Ky.) chapter.

Special mention is due this remarkable piece of work undertaken at the instigation of a Red Cross nurse instructor in charge of the Louisville Red Cross teaching center in the Louisville School for the Blind. Fifteen were originally enrolled in the class, but five were later compelled to leave school on account of illness. The remaining ten, however, four of whom are totally blind, finished the course, took the examinations and turned in excellent papers. The method of teaching was as unique as were the pupils. Twenty lessons were given, the text book being followed in every respect, but the demonstration work and each procedure was made clear to these sightless students by giving each girl the opportunity to handle and thoroughly test out by actual contact the nature and use of the various sick room appliances. That these sightless children, with their pathetic handicap, should be enabled through the course of instruction to widen their usefulness and mental horizon is in itself an invaluable contribution, but when it is further understood that many of them had come from remote communities where little is known of modern sanitation and prophylaxis, the cumulative influence of such teaching in later years among their kinsfolk and neighbors seems incalculable.

Practically every type of school has embraced this opportunity to instruct its youth in the proper way to safeguard health and minimize the dangers of disease and epidemic. Classes have been held in grade, high, private and reform schools; in continuation, vocational, Americanization and Bible Schools as well as in Florence Crittendon homes. In girls' camps and schools for deaf mutes, in colleges and universities, in Indian reservations and in New York's Chinatown, in industrial plants and in commercial organizations, in churches, in social service clubs and Red Cross teaching centers, throughout the nation, in Alaska and our island possessions, the instruction has extended. Foreigners of all nations, employees in varied industries, even the inmates of reformatories, have been united by a common desire to take advantage of this opportunity to learn how to care for their families and themselves.

Good Influence on Wayward Girls

One of the most gratifying testimonials of the value of these courses is the following, written by a superintendent of a home for wayward girls in New Jersey, where the course was introduced by a local Red Cross Chapter:

> The course has given to this group of nineteen girls a real interest and has held their attention as no other school work has done. This group consists of those who are advanced beyond the lower grades, and they are always the most difficult to classify and interest in school courses. Therefore when we see these girls given such a definite stimulus as this course has afforded, we cannot help but feel that it has given them something definite to carry out into the world of which they intend to make practical use.
>
> I cannot but hope that all other institutions for women and girls, if they have not already included this course, can be made to see its value for this particularly difficult group.

In many communities "Health Clubs" are blossoming forth as a direct result of the classes. In the rural districts no obstacles or handicaps imposed by rough going or the elements are too onerous for the instructors and pupils who are enrolled under them. Resourcefulness is the middle name of these intrepid women. In one town the local jail offered the only available space. So the nurse instructor blithely made herself at home in her little cell and fitted it up as a first class workroom for the demonstration of the principles of the course.

At Scenes of Disaster

When disaster strikes, the Red Cross nurse is first in the vanguard of rescue and relief. This was graphically illustrated during the past year in the case of Pueblo, Colo. Probably the value of the nurse was never more dramatically demonstrated in times of peace than in the yeoman service rendered by that profession in marshaling the forces of science and sanitation to put to rout confusion, disease and the ills that follow when every modern appliance for sanitation in a great city has broken down. No service was too onerous, no task too menial, no responsibility too overwhelming for the corps of thirty-seven dauntless nurses who cooperated with the health officers of Pueblo in making the city safe. Obviously, one of the first precautions consisted in ridding the city as quickly as possible of decaying organic matter and in warning the citizens against consuming tainted food and water. These nurses, therefore, served cheerfully as scavengers, wading through mud and filth above their leather top boots and even climbing trees and ruined houses in the process of locating and reporting dead animals and salvaging venturesome children.

Work Following Pueblo Flood

This latter service was doubtless a most valuable and far-reaching contribution to public safety, for prior to the advent of the nurses the juvenile looters from all sections of the city, particularly from the unflooded area, had roamed blissfully through mud and debris to delve elbow deep into filth in search of submerged candy and decaying fruit. When the nurses reported these conditions, proclamations were promptly issued by the health officers restricting all children, whether alone or accompanied by adults, from the flooded area.

To these duties were added the tasks of teaching the sanitary principles, as the boiling of all water, draining of premises, taking care of the general sanitation, garbage disposal, screening against flies and mosquitoes, disposal of waste and excreta, the reporting of stagnant pools and dead animals to the proper authorities, etc.

Enumerated by divisions, the disaster relief rendered during the past year, in which the Red Cross Nursing Service was specifically utilized, was as follows: Southwestern Division, Melissa, Texas, and Texarkana, Ark., and in towns in Alabama and Mississippi (cyclones and tornadoes); in Carlisle, Ky., and Pueblo, Colo. (floods); in Tulsa, Okla. (race riots). Lake Division: Salem, Ohio (typhoid epidemic). Atlantic Division: Seneca Falls, N. Y. (typhoid epidemic); New York City (Wall Street explosion); Burlington, N. J. (train wreck). These statistics, like the others quoted in this article, are as of the fiscal year ending July 1, 1921, being the latest available at this writing.

Loans and Scholarships

By the terms of the will of the late Jane A. Delano a legacy of $25,000 was left to provide for one or more visiting nurses to be known as

the "Delano Red Cross Nurses." This bequest was intended by Miss Delano as a memorial to her father and mother. The terms of the will provide that the royalties from the sale of her textbook, "Home Hygiene and Care of the Sick," also should be added to this fund. Plans are now being developed for the placement of such nurses in communities which cannot provide either the tax money or Red Cross Chapter funds for such nursing service.

Scholarships amounting to $2,250 were given out of the 1920 scholarship fund through Maj. Julia C. Stimson, dean of the Army Nurse Corps, on March 16 to be used by thirty students of the Army School of Nursing at the Letterman General Hospital for incidental expenses in connection with the course in public health nursing at the University of California.

Twelve scholarships, amounting to $3,600, were granted during the past fiscal year to nurses desiring to prepare as instructors in schools of nursing. Four loans amounting to $1,000 were granted to such nurses.

Loan and scholarship funds of the Red Cross Public Health Nursing Service have been awarded during 1920-1921 as follows: 129 loans granted out of the $40,000 Public Health Nursing loan fund established for the purpose; 197 scholarships granted out of the $60,000 Public Health Nursing scholarship fund. In addition to the Public Health Nursing loan fund there was an appropriation of $17,000 for a loan fund for nurses being mustered out of the service.

No account of the activities of the Red Cross Nursing Service would be complete without mention of the Convalescent Home at Bayshore, L. I., where many nurses have found rest and rejuvenation of mind and body. This delightful and home-like house was rented by the American Red Cross and opened on July 1, 1920, for the use of nurses in need of rest or who were convalescing from sickness. Not only the Red Cross organization, but the Army, the Navy, the United States Public Health Service, the War Risk and Federal Board have all made use of it. During the year 294 nurses availed themselves of its privileges.

The Rewards of Nursing

The atmosphere of the Bay Shore House is one of extreme friendliness and homeliness. There is no suggestion of the institution, and a group of young women gathered there, no matter for what reason or with what ailment, represents a contented family. A nominal charge is made, but every consideration is shown to those who are unable to pay. This house is near enough to the ocean to make sea bathing possible. There is a garden in which the nurses may work if so inclined. Tennis and croquet for the more active, hammocks and a library for those not so robust make provision for recreation suited to all types of convalescence. Residents of the community extend courtesy to the nurses, frequently sending their cars to take them driving.

In the category of careers peculiarly suited to ambitious young women no vocation is richer in rewards than that of nursing. The nurse has proved almost indispensable in the scheme of human affairs. An adequate supply is the first bulwark of national prosperity, even as health is the first requisite of success.

But to keep the supply of properly equipped nurses at their professional best the educational standards of the schools of nursing must be put firmly and permanently upon the basis of bona fide schools and genuine training. It must not be because of misguided and archaic methods of economic administration and short-sighted policies on the part of hospital boards and others that the available supply of the professionally fit grows less. Rather should the world-wide need of modern nursing find a commensurate response in the maintenance of endowed schools of nursing. That a school should be so dependent upon a hospital that its students must virtually serve as unpaid and hard worked employees of the institution is an injustice to the potential nurse that reacts upon the entire community and is disastrous in its effects upon pupil nurse enrollment. I advocate, wherever possible, the non-payment system for student nurses. Anything more than the smallest possible allowance for necessary expenditures might be misconstrued as a payment for services and might detract from the dignity of the school and the high calling of the profession. All schools of nursing should be a endowed not only in the literal sense with the dignity and prestige belonging to any other institution of higher education.

Although all educational propaganda must of necessity be of slow and gradual growth, it will, with equal certitude be cumulatively constructive in its influence upon the public mind. Each year sees a more intelligent realization on the part of the general public of the reasons for the insistence of the nursing profession upon the highest educational standards and professional ethics. Despite the fact that in some of the so-called "schools of nursing," where little inducement and actual training is given in exchange for the long hours of service required of the pupil nurses, registrations are falling off, nevertheless, wherever bona fide, thorough training is offered, the highest type of American womanhood may be found eager to enter such schools of real nursing training.

PROMINENT FIGURES IN THE HOSPITAL FIELD

President
Dr. Walter B. James
National Committee for Mental Hygiene

President
Mrs. Mary DeGarmo Bryan
American Dietetic Association

President
Dr. Herbert J. Hall
American Occupational Therapy Association

President
Dr. Lawrenson Brown
American Sanatorium Association

President
Dr. James Alexander Miller
National Tuberculosis Association

NUTRITION AND DIETETICS OF TODAY

By MISS LULU G. GRAVES, Supervising Dietitian, Mt. Sinai Hospital, New York

THE attempt to sum up the development in dietetics becomes increasingly difficult each year, not because the development is so great nor because of any lack of development, but because so much of the best in this development is not in tangible form and cannot be expressed in words.

The public during 1921 has become so alert to its nutrition needs that there no longer exists for the dietitian the question of spreading the gospel but rather the problem of keeping up with the converts. Both the individual and the family are taking a more intelligent interest in food and food habits.

Among steps in progress during the year are the inauguration of courses in health at the Montana State Normal School, the establishment of nutrition classes for children in New York City, the Metabolic Clinic at Santa Barbara, Cal., the founding of a chair of nutrition at the University of Iowa and the achievements of committees of the American Dietetic Association.

The general attitude, and I use the term "general" advisedly, has changed to such an extent that the nutrition worker, the medical man and the dietitian must be constantly on the alert to meet the calls for information and for help from practically every group or type of family life. It is no longer a question of spreading the gospel so much as it is a question of keeping pace with the convert. In the widespread movement for health improvement, an important consideration is an intelligent interest in food and food habits. A very noticeable change in this respect has taken place in both the family and the individual.

Attention is being given to this subject in our public schools. The experiment in teaching health in the State Normal School at Dillon, Mont., has already accomplished enough to take it out of the experimental class. The nutrition classes in New York City conducted through the combined efforts of the Red Cross, the public school and the physician have set an example which should be followed in every community. It is not yet a year since these classes were begun but they have had remarkable development and proved of so great value that they are being extended to reach the child of pre-school age. Details of this work were given at the annual meeting of the American Dietetic Association by Mrs. Mudge, and in an article by Mrs. Storer and Mrs. Mudge published in the November issue of the *Journal of Home Economics*. The work of Miss Lydia Roberts and physicians in Chicago has been mentioned previously in THE MODERN HOSPITAL; probably no other phase of nutrition is being given more thought or developing more rapidly at this time than is this work with children.

This promises well for professional and an individual standpoint. Parents realize the importance of forming right habits in childhood and wish their children to have advantages which they missed, even though they may have spurned this information a few years ago.

We are continually confronted by numerous instances of persons suffering with diseases that may be traced directly or indirectly to improper food habits. The pamphlet on national nutrition put out by the committee on food and nutrition of the National Research Council might have a tendency to lessen our optimism, but on the contrary, it should encourage us to know that studies are being made and facts established that will provide a foundation upon which to build. We are told that "members of the International Board agree that the prevention of tuberculosis is in a great measure a dietary problem and that probably more than fifty per cent of all children in the United States suffer from rickets at some time during infancy or early childhood as a result of improper feeding."

Public health organizations are asking for dietitians to teach proper selection of food and proper cooking of food in the homes in which they are interested. Parent-Teacher Associations in many communities are taking up a systematic study of food and nutrition, and home economics teachers in the schools are giving thought to the ways and means for making practical applications of their work in the homes of the students.

Not so much that is new has been found in the commercial world during the past year. Economic conditions have not been conducive to new things or to the development of anything which has not proved itself to be stable and essential. Large manufacturing concerns and wholesale establishments have given us nothing particularly new, but some of them have strengthened their department of food service and in many ways enhanced its value to both the company and the employers. A number of banks have conceded that a home service department is a de-

cided asset. The Society for Savings in Cleveland first inaugurated such a service a few years ago, and a number of banks in various sections of the country have since adopted the plan. This is not specifically a service in nutrition, but the family income, as well as its health, is so largely affected by the food bought and served that a close alliance is evident. Such a department in a bank must necessarily be regulated with a business viewpoint but the very fact that bankers consider such a service as a part of good business is significant.

Canners An Ally in Work

A recent development which will no doubt be of great value is the step taken by the National Canners Association. Through this medium the nutrition expert, the dealer and the producer of foods will be enabled to work together more closely and harmoniously than in the past. Readers of THE MODERN HOSPITAL have learned to expect much help from the work of John Phillips Street and this opportunity given him to do even greater work will undoubtedly result in giving us additional aid. The National Canners Association is to be commended upon its continued efforts to raise and maintain high standards in canned goods.

In hospitals the movement for better dietary departments goes forward. Little has been done in the way of new or unusual things but a great deal has been done in the way of advancement. A number of hospitals throughout the country have established new and better systems of food service, provided more and better equipment and in other ways made plans for continued progress in this work.

The writer had the privilege during the summer and autumn of going very carefully over the plans for kitchens and storerooms of nine hospitals which are now under construction. These included both small and large hospitals and represented almost every section of the country. In every instance but one the thought and consideration given to the arrangement, equipment, and convenience of workers were remarkable. A few years ago such a plan was unknown. Even more gratifying was the plan in mind for development of dietary work of a high type in each of these institutions. We have been accused of having ideas and ideals for this work which were difficult, not to say impossible of achievement, but we found one hospital man in the above mentioned group whose ideas left us about twenty years behind.

Another hospital, Mount Sinai, New York, is planning to enlarge the scope of the dietary department with the opening of its new private pavilion. An indication that the plan will be successfully carried out is that the supervisors and head nurses in the training school are now attending a series of informal talks given by the dietitian once each week. This discussion of their specific problems prepares the way for good team work as the work develops.

In several hospitals, the dietitian is being invited to staff meetings. One does not presume to predict what may be accomplished by each getting the other's viewpoint through such an arrangement as this.

A number of hospitals are putting forth every effort to make their dietary departments of greater service to the institution by giving thought to the diet of the patient with undisturbed digestion as well as to the one needing dietotherapy and by providing a suitable diet for those who are employed in the hospital.

This year the American Hospital Association added to its organization a section on dietetics. At the annual meeting in West Baden this section was given a place on the program of one of the morning sessions. The papers read and subsequent discussions evinced such interest that the time allotted proved to be entirely too short. Calls were heard on every side for more time for this section next year.

The metabolic clinic at the Cottage Hospital, Santa Barbara, Cal., is starting out on broad lines yet with sane principles; splendid results are anticipated from the work being done there. Their plan has been explained in THE MODERN HOSPITAL by Miss Florence Smith, the dietitian, and Dr. Frank Nuzum.

Iowa Has Chair of Nutrition

The medical school of the University of Iowa has established a chair of nutrition and Dr. Ruth Wheeler has been appointed to fill the position. This is probably one of the most significant happenings of the past year. Dr. Wheeler is eminently fitted for this work, and Iowa has shown itself to be very progressive. Dr. Amy Daniels has been associated with this university as a nutrition worker for two years.

The American Dietetic Association held its fourth annual meeting in Chicago in October. There were between 600 and 700 in attendance and a very lively interest shown throughout the entire meeting. Three days were devoted to a full program and the fourth was spent in field trips to various institutions in the city. A dinner in the banquet room of the La Salle Hotel was a feature of the program Monday night and a luncheon was held at the Chicago Beach Hotel on Thursday. The program was a broad one, and every member in whatever line of work she was

engaged had opportunity to receive information and inspiration.

The officers reelected were: President, Mrs. Mary De Garmo Bryan; treasurer, Ellen Gladwin; secretary, E. M. Geraghty. The newly elected officers were: First and second vice-presidents, Helene Pope, Carnegie Institute, Pittsburgh, and Octavia Hall, Peter Bent Brigham Hospital, Boston.

The A. D. A. has become a member of the American Conference on Hospital Service. Two delegates, Miss Rena Eckman and Dr. Ruth Wheeler, were sent to the meeting of the American Hospital Association at West Baden. A representative was sent to the meeting in Chicago in March.

Committee Reports of Value

Activities for the benefit of the profession are being carried on and extended. As reported last year, committees were appointed to investigate present conditions and make recommendations which would be helpful in raising the standard of dietitians as well as of dietary departments; to suggest courses of training for dietitians both in colleges and hospitals; and to collect information relative to books, journals, equipment, methods, etc., which would be of value to the members. Reports from these committees were given this year. Abstracts from the *Journal of American Medical Association* for the year 1920 were prepared by the section on dietotherapy and were distributed at the meeting. These are most valuable aids to the busy worker.

No doubt there is a great deal being done by organizations and institutions other than the steps that have been mentioned. We find persons engaged in this work modest about telling of their achievements. One cannot visit hospitals, dispensaries or public schools, or attend meetings of those engaged in this work without seeing and feeling that steady progress is being made in knowledge of dietetics as well as in its practical application, and that the undaunted spirit which has brought this science through the stages of indifference, skepticism, and receptivity to the place it now holds is deserving of great credit.

GETTING A DIPLOMA IN NUTRITION

By JAMES A. TOBEY, National Health Council, Washington, D. C.

While most of New York City was watching parades on Armistice Day, several hundred persons assembled in the auditorium of the Nurses' Residence at Bellevue Hospital to witness a unique event. The occasion was the graduation exercises of a nutrition class. It was held not only for the benefit of the graduates themselves, but also as one of the features of the Health Institute of the American Public Health Association which took place in New York City during that week. Registrants for the institute came from all over the United States and from three foreign countries, and many of them attended these exercises.

The nutrition clinic at Bellevue is held every Wednesday and Thursday afternoon. Children of school age who are seven pounds underweight for their age and height are referred to the special nutrition class from the general medical clinic. Here they and sometimes their parents are given proper instruction as to what and how to eat and are required to follow certain rules of health. A chart is kept for each child and progress noted upon it. Those who come to the clinic represent the very poor, and so an endeavor is made not to require expensive foods, impossible for them to obtain.

When a number of children have reached normal weight and maintained it for a period, graduation exercises are held. They are conducted just like those of a regular school. The graduates, dressed in their finery, are seated on the stage. To each is given a diploma, tied with blue ribbon. When it is presented, the doctor discusses the nutritional career of the recipient. He tells how Linda Antonina overcame this or that defect, how Mary Kelly succeeded by perseverance, how Rosie Stransky slumped for a while but won out in the end. The audience, composed of proud parents, relatives, and friends applauds enthusiastically. Those children who have failed so far, together with their parents, are also seated in the audience. The commendation of the successful ones has a stimulating and inspiring effect on them so that they, too, resolve to achieve.

Not the least interesting phase of the occasion is the presence of the alumni association. Those who have previously graduated form the alumni. They are given seats of honor on the stage. There are now about fifty who are included in this proud category. They must themselves follow the rules of health, eating the right kind and amount of food, eating slowly and chewing well, sleeping ten hours a day with open window, resting an hour a day, keeping body and clothes clean, brushing teeth after meals, and having bowels move before school. Otherwise, they go back into obscurity in the class.

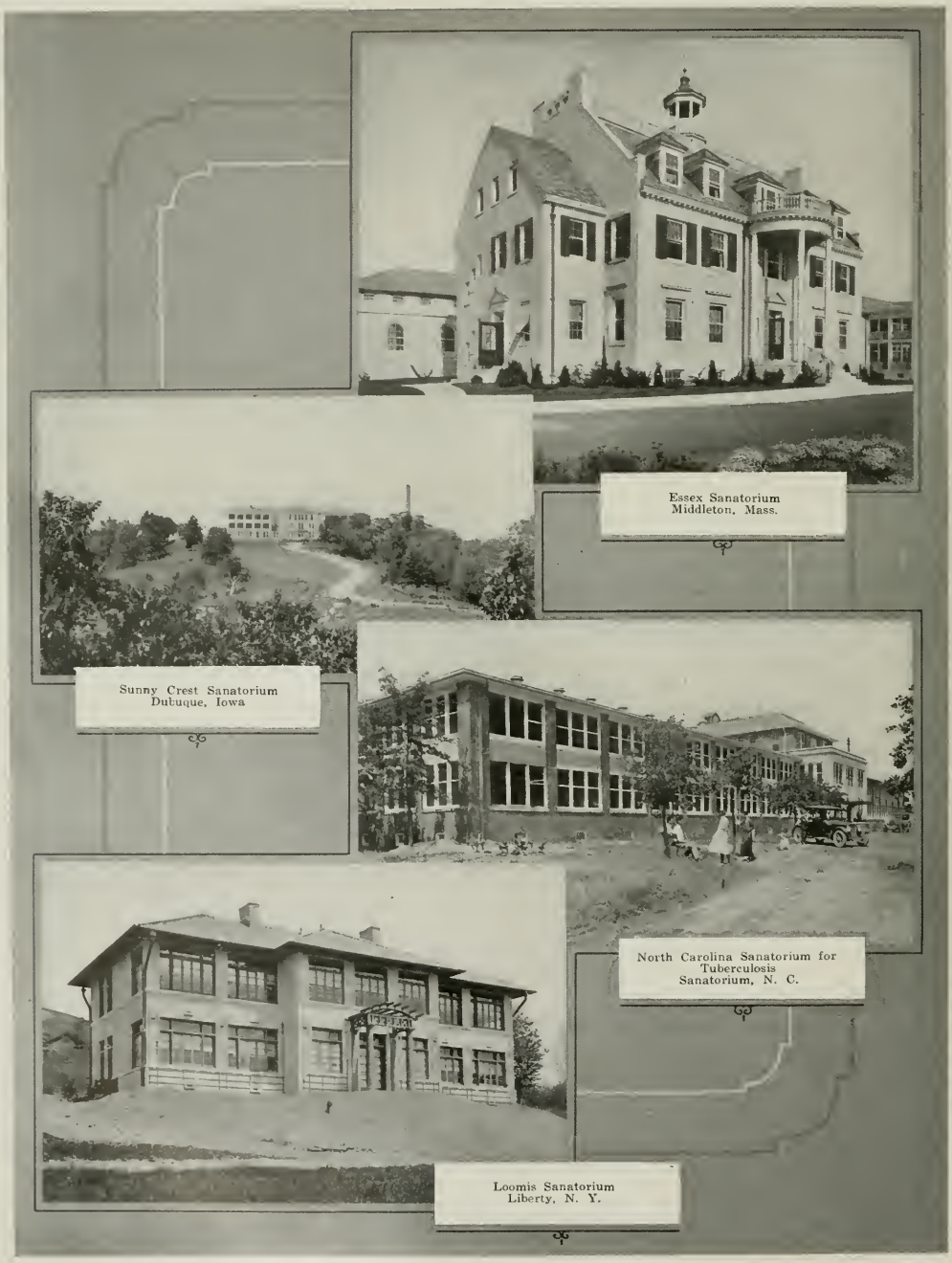
Following the exercises an entertainment is held. On Armistice Day, it was a Punch and Judy show. Of course, the subject featured was that interesting one called Health. On other similar occasions, a ventriloquist appeared and told his dummy how to be healthy and happy. Cho Cho has been there, too.

These nutrition clinics were inaugurated in the spring of 1920. About 200 children are enrolled, with an average attendance at the clinics of twenty. They are under the general direction of Dr. Charles Hendee Smith, chief pediatrician of the hospital. He is assisted by Drs. Hugh Chaplin and Laurence Dowd. A social service worker, Miss Mary Flood, has direct charge of the children. She is one of the forty-six social workers of Bellevue, all under the supervision of Miss Mary E. Wadley.

This diploma in nutrition means much to the East Side of New York. It represents the right kind of psychology in dealing with children. It is a game, the playing of which means life itself. And the goal is not merely a blue ribbon around a white paper—but a better manhood and womanhood.

One hospital board of managers thought the only way to manage a hospital and training school for nurses was to keep the superintendent of the hospital totally ignorant of the work and activities of the training school. It is easy to see that it is quite impossible for a superintendent to be held responsible for all departments unless he or she knows the daily condition of each department.

GROUP OF 1921 TUBERCULOSIS SANATORIUMS



Essex Sanatorium
Middleton, Mass.

Sunny Crest Sanatorium
Dubuque, Iowa

North Carolina Sanatorium for Tuberculosis
Sanatorium, N. C.

Loomis Sanatorium
Liberty, N. Y.

SOME 1921 ACTIVITIES IN THE FIELD OF HOSPITAL SOCIAL SERVICE

By MARY ANTOINETTE CANNON, New York City

Among accomplishments of the American Association of Hospital Social Workers during 1921 the organization of sundry local districts with subdivisions, either geographical or functional, is probably the most fruitful of results. Great benefit has also been accomplished by the Association through cooperation with committees of the American Hospital Association and other national units. Annual and semi-annual sessions have been planned and carried out, and a travelling executive secretary has succeeded in extending widely the influence of the organization. Plans for the future center about the production of medical social workers sufficiently well trained to carry the work forward.

AN IMPORTANT change in the American Association of Hospital Social Workers went into effect in 1921. This was the decentralizing of the organization by the forming of local districts, each one with its own officers, executive committee and program. Final action to permit such organization was taken by the association at its semi-annual meeting in Montreal in October, 1920; local action began immediately afterward and is still going on. The first district to be formed was the Middle Atlantic, including Baltimore, Md., Camden, N. J., Wilmington, Del., and Philadelphia, Chester, Lancaster and Wilkes-Barre, Pa. Districts have also been formed in New England, New York (including Montreal and part of Connecticut), Illinois, Missouri (St. Louis), and Minnesota.

Some of these districts are already considering subdivision, either geographical or functional. In the Middle Atlantic district the cities included are so far scattered that it is impossible to hold district meetings oftener than once in two or three months. Therefore local sub-committees have been formed in Philadelphia and in Baltimore to enable the hospital social workers of those cities to meet more frequently to consider local affairs which need to be dealt with promptly. The same form of subdivision is to take place in the New York district. In the Illinois district, on the other hand, the plan of subdivision is along lines of special interest. The district will be divided into sections on psychiatric social work, work with children, tuberculosis and other special subjects.

Two matters which will be delegated to the districts are the enrollment of new members and the collection of dues. These functions have heretofore been performed by officers and committees of the national organization. The recruiting and enrolling of new members have illustrated most clearly the difficulty of handling a country-wide group in this way. It has been impossible for the national membership committee, a representative and therefore widely scattered group, to meet in order to take action on application for membership and much time has been consumed in correspondence among the members of the committee. Under the present plan, applicants for membership are enrolled each in her own district. The examination of credentials and the recruiting of new members are taken care of by a local membership committee which is obviously in a much better position than a national committee to get direct information in regard to candidates.

Local Organizations Valuable

The collection of dues in the districts will not only relieve the national treasurer of a large part of her heavy burden but also will bring greater returns for the amount of effort expended in collection. Moreover the districts are expected to take part in the raising of extra funds which will be necessary in order to carry out the association's program for the coming years.

Perhaps the most important purpose served by the district organizations is to bring to the supporters of hospital social work throughout the country tangible evidence of the necessity and value of organization in hospital social work and a local demonstration of the activities of the association. Thousands of people may be reached in the districts who might never be able to attend annual or semi-annual meetings of the national association. The validity of this prophesy has already been proved by the success of the public meetings held in the Middle Atlantic district during the year.

Report of Annual Meeting

In October 1920 the association secured the part time services of Miss Ruth Emerson as executive secretary. In this capacity Miss Emer-

son has met with groups of members in various parts of the country, including Chicago, Milwaukee, Minneapolis and St. Louis. In every case her visit has resulted in the forming of a district or at least in concerted action of the local group. Miss Emerson has also carried on considerable correspondence with hospital social workers seeking help and direction and with others interested in the establishment or conduct of departments of hospital social work. Thus by traveling and writing she has stimulated and developed interest to a very considerable extent throughout the country. She has, in cooperation with the Hospital Library and Service Bureau, prepared a bibliography of medical and psychiatric social work and she has served as chairman of the program committees for association meetings, thus helping to contribute to members of the association the information and guidance they are constantly seeking.

The regular annual meeting of the association was held in June, 1921, at Milwaukee at the time of the National Conference of Social Work. At this meeting the report of the American Hospital Association's committee on survey of hospital social work was brought up for further discussion. (It had formed a topic of discussion at the preceding semi-annual meeting.) This survey was an important event in the field of medical social work and now serves as a basis on which the association may proceed to develop standards.

Following the discussion of the survey at the annual meeting, a committee on definition of function was appointed. This committee brought in the following report, which was adopted at a business meeting of the association:

"Case work.—By the method of social case work to care for ward patients and out-patients whose medical and social conditions indicate need of adjustment in order to render their medical treatment effective and restore them to health and sound social condition.

"Research.—To study social causes of health and behavior.

"Education.—To cooperate with schools of social work in training of students for hospital social work. To give to students from training schools for nurses, from medical schools, and from schools of sociology and psychology, insight into the social (environmental) conditions through lectures, required reading and field work. To interpret the hospital to the community by poster, charts, public speaking and other means and to make the resources of the institution available to persons in the community. To educate the public by the same means in hygiene and to teach the relation between social conditions and health. To cooperate with such outside agencies, institutions and interested individuals as may serve to enlarge the function of the hospital and render its care of patients more effective.

Temporary Functions of Association

"It may be necessary to undertake, for a time, certain duties that are not essentially the function of hospital social work, such as the duties of clinical clerk, admitting clerk, financial investigator for the hospital, and messenger, which may be performed for a time with the intention of helping the hospital to fulfill its obligation toward the community as well as to the patients. In undertaking these temporary and supplementary duties it is important not to lose sight of the fact that the primary function of hospital social work is social case work and the best contribution of hospital social work both to the hospital and the community is to perform this function."

It was stated at the annual meeting that following the report of the committee on the survey, a second committee had been appointed by the American Hospital Association to take up the question of training for hospital social work. This, it will be seen, is directly in line with the interest of the association. The study will be carried on during the coming year and will receive all possible cooperation from the association.

An interesting feature of the annual meeting was a series of round table discussions on the following subjects: Problems of executives in small departments; types and usage of social records; psychiatric social work; training for hospital social work; problems and programs of local districts; the social worker in classes, nutrition, cardiac, etc.

Medical social work was represented in two sections of the national conference,—the section on family case work in which Miss Ida M. Cannon had a paper on "Functional Relations of Family Case Work Agencies with Medical Case Work," and the health section, in which Miss Cannon spoke on the "Relation of Hospital Social Service to Child Health Work."

Miss Ida M. Cannon of the Massachusetts General Hospital was re-elected president of the association for 1921-22.

The president and treasurer represented the association at the annual meeting of the Conference on Hospital Service in Chicago in March.

In September, 1921, the semi-annual meeting of the association was held at West Baden, Ind. This was a comparatively small meeting but the program was good and the discussion all the more helpful for being exceedingly intimate and informal.

In the intervals between meetings of the asso-

ciation, business has been carried on by the executive committee, which has held a number of meetings during the year. Its two main problems have been the raising of sufficient money to carry on an active program and the securing of an executive secretary to succeed Miss Emerson. The executive committee reaches the end of the year with these two large questions still undecided but in a far more hopeful position than they were in at the same time a year ago. The activity of district executives has already improved the situation as to membership and therefore the finances of the association, and with district support there seems no reason why the program of the association should not go forward. The program in detail as adopted at the annual meeting is as follows:

1. Strengthen district organization through a definite program of intercommunication.
2. Arrange program of the association's meetings with the National Conference of Social Work and the American Hospital Association.
3. Increase literature on hospital social work (contributions to journals).
4. Prepare an exhibit for use at conferences of American Hospital Association, American Medical Association, National Conference of Social Work and for local groups.
5. Secure representative of association at meetings of related groups.
6. Work out relationship to National Social Workers' Exchange.
7. Get a training committee to work with training committee of American Hospital Association to yield to that committee the experience and point of view of the hospital social worker in the field.
8. Define the function of the publicity or educational committee.

To Train Medical Social Workers

To sum up the accomplishments of the year, they include the organization of local districts, the planning and carrying out of annual and semi-annual meetings, the work of the executive secretary in traveling and correspondence, and cooperation of the association with committees of the American Hospital Association and with other national units.

The plan for the future centers about the production of hospital social workers trained and equipped to carry forward the work according to standards to be established.

Miss Emerson says in her report to the executive committee: "I undertook this work believing that some sort of a national organization of medical social workers is desirable and is the most democratic way of establishing standards of work. I have not changed in this conviction, but I feel that the most pressing need in medical social work is training courses for medical social workers, scholarships for such courses and a lively campaign to enroll students. Without more trained medical social workers it is futile to advise departments how to organize or to suggest plans to develop departments already under way. Without training courses there is no answer to the workers already on the job who want further training."

This expresses the point of view of the association as a whole. It is expressed again in the statement of function and again in the program quoted above. The interest in this subject on the part of the American Hospital Association is no doubt to be of great help to the American Association of Hospital Social Workers. It is through education that the association can best fulfill its purpose of "extensive and intensive development."

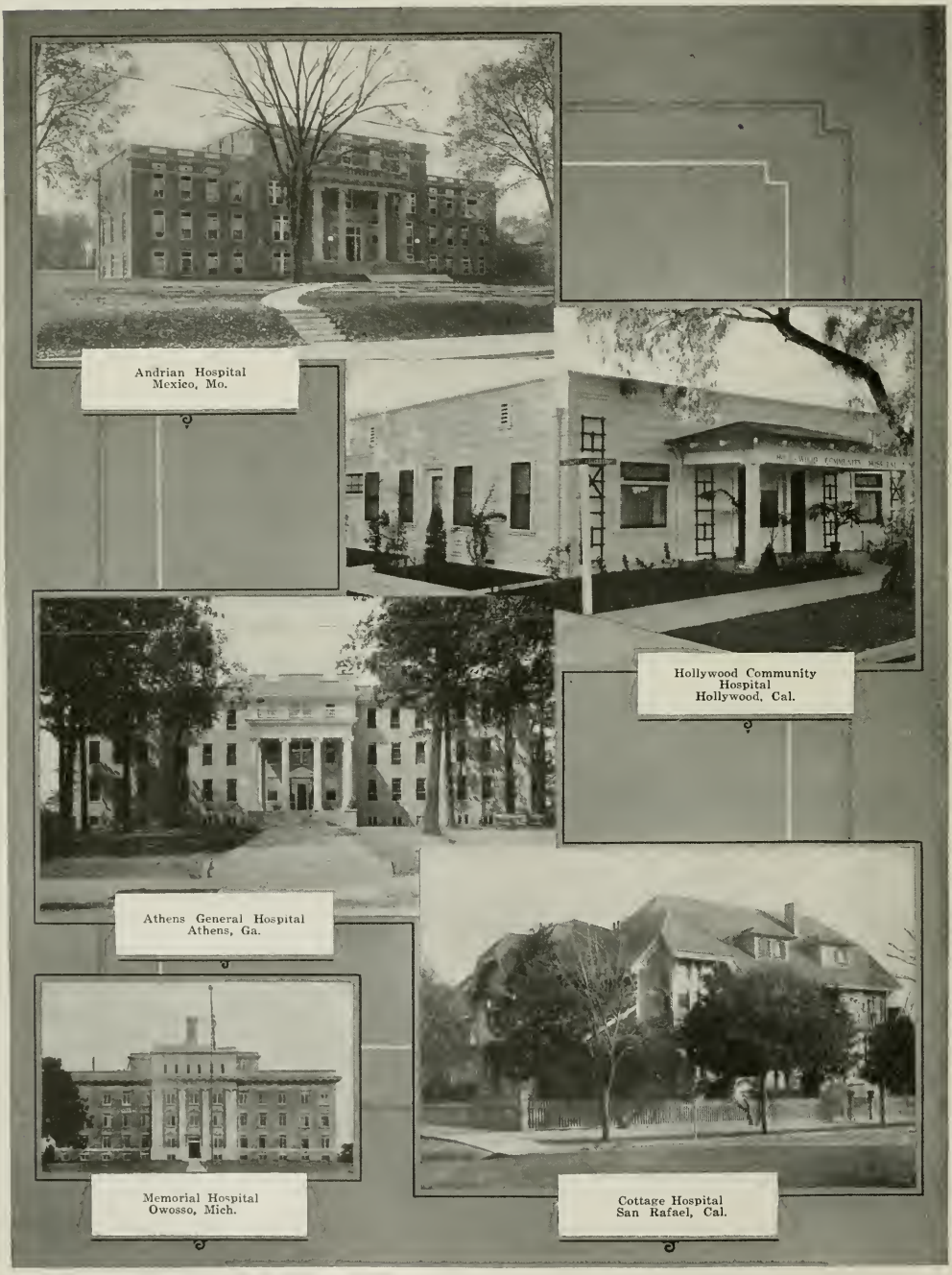
BRITISH HOSPITALS TO INTRODUCE PAY SYSTEM

The *Pall Mall* and *Globe* state that it seems that British hospitals are awakening to realities, and realizing that only by frank acceptance of the paying patients is state control to be avoided. Under state control these papers feel that the hospital as we know it, would pass away. It is too bad that the hospitals have failed at an earlier period to recognize the social changes which have cut off the old supply of subscriptions and created a large class of poor which cannot pay for high priced doctors' and nurses' service in their homes. Had the paying system been introduced earlier, hospitals would not now be finding it necessary to close down wards on account of lack of funds. King's College Hospital, when the number of occupied beds has been reduced to 200, will introduce a paying system. It seems that if a graduated system of payment for value received is started on a business-like basis nothing more will be heard of insolvency. Now, instead of the hospitals being free to all, they are really closed to those who need them most, the middle classes who are the poor today. It is only the rich and the presumably poor who received adequate medical care. Besides the introduction of a pay system, better organization must be introduced into the hospitals if they are to be operated upon a firm financial basis.

THE INTEREST OF THE COMMONPLACE IN PUBLICITY

Dr. M. T. MacEachern, general superintendent, Vancouver General Hospital, Vancouver, B. C., appreciates the interest values of the commonplace when bulked, and in his "Bulletin" sent to former patients and friends of the hospital, says: "We use yearly, 90,300 gallons milk, 65,700 dozen eggs, 30 tons butter for eating purposes only, 260 whole beeves, 624 mutton, 6,240 fowl, 36,500 fish, 219 tons potatoes, product of fifteen acres, sixty tons stock vegetables, 18,000 lbs. of fruit, 13,500 lbs. of dried fruit, 219,648 oranges, 93,600 lemons, 250,000 lbs. bread. The loaves measure two feet long. If laid out end to end would stretch forty-seven miles; if piled would measure 15,000 cubic feet, or approximately the size of an eight-room house."

SOME SMALL HOSPITALS OPENED IN 1921



Andrian Hospital
Mexico, Mo.

Hollywood Community
Hospital
Hollywood, Cal.

Athens General Hospital
Athens, Ga.

Memorial Hospital
Owosso, Mich.

Cottage Hospital
San Rafael, Cal.

OCCUPATIONAL THERAPY IN 1921

By HERBERT. J. HALL, M.D., President, American Occupational Therapy Association, Marblehead, Mass.

OCCUPATIONAL therapy is still a newcomer among hospital departments. For some time, we may have to account for its presence or absence, as the case may be. We may even have to explain exactly what it is to those who have not understood or have not yet become acquainted with its practical application. I have placed at the head of this review Dr. H. A. Pattison's definition, which is the best one I have yet seen. That definition sums it all up very well.

The following definitions by Dr. A. H. Pattison of the National Tuberculosis Association are selected by Dr. Hall as best describing the functions of occupational therapy:

Occupational therapy is defined as any activity, mental or physical, definitely prescribed and guided for the distinct purpose of contributing to and hastening recovery from disease or injury.

Prevocational training is defined as any mental or physical activity undertaken for the purpose of determining the general aptitudes and vocational tendencies of an individual, or for the purpose of overcoming educational or physical deficieney preparatory to full vocational training. When prevocational training is medically prescribed it is occupational therapy.

Occupational therapy is based on the old truism that Satan finds mischief for hands and minds too long idle, and upon the proper corollary that the man who does nothing else is likely to go to the devil; the devil for hospital convalescents meaning general demoralization and dependence—failure, in short. No matter how perfect the surgery or the medical care, no matter how good the physiotherapy and the follow-up of social service, if the convalescent does not quickly use the faculties which have been put out of commission, he is in danger of the scrap heap. It is astonishing but true that if the human machine is stopped violently it will not go again without an effort. This effort frequently fails to materialize.

The encouragement of effort in the convalescent is the very special care of occupational therapy. Someone who knows how must be ready to pick up the discouraged and inert patient, and help him put his faculties again into working order. Anyone who doubts the need of special training and preparation for this service has only to try it in a few difficult cases to be convinced that it is a full-sized job and one requiring adequate training.

In looking over the field of occupational therapy during the past year, the most impressive sign of progress seems to be in the schools, which now for the past five years have been preparing young women for this practical work. There are and always have been differing opinions about the educational program, but gradually we are approaching a common standard. The curriculum just adopted by the Boston School of Occupational Therapy, Inc., is, I think, likely to be accepted as reasonable and adequate for some time to come. It follows:

MEDICAL

Anatomy and Kinesiology
- Brain
- Spinal cord
- Special senses
- Peripheral nerves
- Osseous system
- Muscles
- Circulatory system
- Digestive system
- Generation organs
- Respiratory system
- Glandular System
- Skin

Neurology
- Function of the central nervous system and peripheral system
- Paralysis (tumors and localization)
- Disease of and injury to nerves

Mental Diseases
- Normal function of the brain
- Organic and inorganic diseases

Psychology
- Lectures including normal and abnormal and intelligence tests

Personal Hygiene

Mental Hygiene

Hospital Ethics and Management

Orthopedics
- Deformities, congenital and acquired
- Anatomy of joints
- Diseases of joints
- Posture, bodily mechanics
- Fractures
- Arthritis
- Tuberculosis
- Infantile paralysis

Physiotherapy
- Including a definition and practical survey of hydrotherapy, electrotherapy, joint manipulation, and massage

Tuberculosis
- Etiology, pathology, symptomatology and treatment

Syphilis
- Congenital, acquired, hereditary

Contagious Diseases

Blind
- Braille system and visits to Perkins Institute

Clinical Records and Bookkeeping

Lectures on the general survey of theory and practice of occupational therapy in its relation to the various subjects in the course

Special Observation Trips
- Massachusetts School for Feeble-Minded
- Mattapan Tuberculosis Hospital
- Massachusetts General Hospital
- School for Crippled Children
- Industrial Plants

SOCIAL SERVICE

Preliminary Lectures

Trips (plus lectures)
- Dennison House—Folk Handcraft (Italian, Armenian, Greek)
- Elizabeth Peabody House (Jewish, Ukranian)

North Bennet Street Industrial School (Italian)
South End House (general)
The Little House (Irish)

One day a week during the first nine months, each student spends in a settlement house—visiting, and having classes.

Once a month the students attend the Boston Social Union meetings, where all questions connected with settlement work, such as emigration, unemployment, etc., are discussed, and where prominent speakers in vital questions of the day are heard.

This social service work is believed important by the school because an aide increases her value and is of more help to her patient if she has a practical and personal knowledge of the homes and community life, habits and traditions of the various nationalities that make up America.

CRAFTS

Major Crafts
- Applied design
- Basketry
- Bookbinding
- Dyeing
- Jewelry
- Leather Work
- Modeling
- Tin Work
- Spinning
  - Preparation of wool, carding, spindle stick, wool and flax wheels.
- Weaving
- Woodwork, Chip Carving

Minor Crafts
- Beads
- Block Printing
- Brushes
- Chair Seating
  - Cane
  - Splint
  - Shaker
  - Rush
- Children's Work
- Colonial Mats
- Furniture Repair
- Jute
- Knotting
- Mops
- Netting
- Rake Knitting
- Stenciling
- Telegraphy
- Typewriting
- Rugs
  - Braided
  - Braid weave
  - Crocheted
  - Coir mats
  - Hooked
  - Persian

Special Trips—connected directly with handcraft work, such as Irving Casson Factory, the Medical Workshop at Marblehead, etc.

Naturally some of these subjects are treated rather superficially and with only a few lectures. The course covers a period of nine months and an additional three months of actual hospital work under the observation of the school is required for graduation.

It will appear that there is a fairly stiff course awaiting the young woman who wishes to undertake occupational therapy, and the severity of the course should be a reassurance to those who wish to see the profession respected.

Special Schools Essential

There is in the minds of some teachers the hope that women's colleges may offer courses which will lead to occupational therapy and so shorten the necessary time of preparation for college graduates or leave more time for practice work in the hospital wards. On the face of it, the idea is attractive, but the fact is that such subjects as anatomy, physiology, and psychology, taught from the viewpoint of general knowledge, do not help much in special education. For the present, at least, in spite of possible reduplication, we shall have to depend mainly on the occupational therapy schools with teaching all centered on one object and directed from one point of view.

Medical men, generally, may not know it, but there are now a half dozen occupational therapy schools in different parts of the country. The classes are not large; they average perhaps twenty graduates a year. But these graduates and the aides, who got their training in military service, are doing, and are well prepared for, serious work.

There is a question of whether the occupational aide should teach only the simple handicrafts which have been so useful in arousing interest and in developing power to sustain effort. The time is coming when a prolonged stay in hospital or sanatorium will be something in the nature of a liberal education for the patient. It is an opportunity too good to be lost. I believe that the aides' work will become in a large sense re-educational. Undoubtedly, she should be prepared to teach the "three Rs" and something of good citizenship, but the main reliance in the great majority of cases will have to be upon the handicrafts. It must not be forgotten that bedside handiwork will often enough open the way for real re-educational possibilities in many lines.

Short Courses for Undergraduates

In a number of hospitals, the undergraduate nurses are now given a short course in occupational therapy. This is right enough, for the nurse should have some practical and theoretic knowledge of bedside occupations. With this understanding, she will have a new resource for private practice; she will also be better able to cooperate with the occupational therapy aides to their common service to the patient. But let no one suppose that the whole responsibility for occupational therapy should rest upon the nurse. She is too busy in her own department to do the work well, and occupational therapy is a full-time job.

Several new state societies of occupational therapy have been formed during the year, and this is a most helpful and promising sign. Such a function as occupational therapy, no matter how well trained the teachers and aides, needs collective backing, needs guidance. If the thing were left to individuals, progress would be too slow, too uncertain. Mistakes would be multiplied and new discoveries would remain too long obscure. It is through organization that real progress will be made. The aide who feels that she has a whole state society backing her and criticising her will do better work than one who has no such association. Occupational therapy needs publicity and support, which can come best through group action.

I want to call attention particularly to the national society, now called the American Occupational Therapy Association. It was first in the field. The schools and state societies have followed. This association, now numbering nearly

500 members, is functioning well as a clearing house for ideas and suggestions, as a placement bureau for aides and as a source of accurate information for hospitals and individuals. It is not a dictatorial body. Its governing board is now made up of representatives from all existing state societies; it suggests and helps but so far has not developed rigid standards of education or conduct. The situation is still too fluid for that. It is much better for the state societies to make their own requirements. But the annual meetings of the parent society furnish wonderful opportunity for general enlightenment and for the reunion of aides teaching in widely separated localities. At the meeting in Philadelphia last year, we had present aides from practically every state in the union. This year in Baltimore, there were 220 in attendance, some from the far western states.

The American Occupational Therapy Association needs a very large membership not only of aides, teachers, and directors, but of doctors, nurses, social service and charitable workers, who are interested in occupational therapy and in its possible reciprocations all along the line.

Here, then, in the comparatively short space of five years, we see a complete system, national and state societies and schools cooperating for a common end, the development of occupational therapy, not as an isolated and self-important function, but as a link in the chain of human rehabilitation. Is so much machinery necessary? It certainly is, if we are to be saved unnecessary delays and disappointments.

Occupational therapy has come to stay. The advocacy of the principle, the staunch support of such men as Dr. W. Gilman Thompson, Dr. Adolph Myers, Dr. Foster Kennedy, Dr. G. Canby Robinson, Dr. E. G. Brackett, all of whom have, with many others, written and spoken forcefully and constructively on the subject within the past year, testify to its significance. Perhaps the most hopeful thing about the situation is to be found in the earnestness and intelligence of all those who are behind the movement. They are claiming no imposing array of cures, they are not boasting of their achievements, they know that the hospitals have functioned successfully through all the years without prescribed occupations in the wards, but they believe absolutely that in occupational therapy they are developing an extremely useful auxiliary in the wide field of human rehabilitation.

The greatest need now is of cooperation and understanding among hospital executives and the men of the staffs. The principle is sound enough, but it is a medical principle and it should have everywhere the intelligent support of medical men. It is not fair to ask the occupational aide to prescribe work for the various stages of tuberculosis, for instance. She will do it if she must, and do it intelligently, but the work would be done better and with less danger of harm if the medical prescription were forthcoming—so many minutes of a given work each day with proper and medically supervised records of progress and effect. That is the next step; it is logical, it is fair. Quite often, the aides really do know more than the doctors about the limitations and possibilities of work in given cases. But this is not as it should be. May I suggest that medical men, generally, might with advantage study into this matter of prescribed work, which is of so much therapeutic, economic, and social value.

Institutions Aid in Movement

There remain for consideration three institutions which are progressive and deserve support —the Occupational Therapy Bureau in Boston, the Medical Workshop in Marblehead, Mass., and the Summer School of Occupational Therapy at Byrdcliffe, N. Y.

The Occupational Therapy Bureau's business is to supply materials and designs for craftswork at less than retail prices. It is ready to act as a selling agent for finished products. Membership in this bureau may be obtained through Miss Ruth Wigglesworth, Boston School of Occupational Therapy, 7 Harcourt Street, Boston.

The Medical Workshop confines its activities to the designing and making of wooden toy parts to be assembled, painted, and finished by convalescent patients and handicapped workers everywhere. During the past two years, this shop or laboratory, as it may be called, has supplied its "rough hewn" toys to more than seventy-five different hospitals scattered all over the country. A large number of teachers and aides have been welcomed at the shop for longer or shorter periods of apprenticeship in toy making. The wooden toy stands very high among the crafts available for the handicapped. The disorganized convalescent, whatever his years, is in effect a child and has kinship with children. The making of toys of good design is appropriate and wise. Among other advantages, good toys command a ready market.

There will always be need of postgraduate work for occupational aides. The system moves fast; new ideas, new practices appear every year. All the schools are now open for such teaching, but it remained for the New York Society to develop a summer school at Byrdcliffe, an artists' colony in the Catskills. It is to be hoped that this successful school, or some equivalent graduate school, will be continued.

VENEREAL DISEASE CONTROL DURING 1921

By ALEC N. THOMSON, M.D., American Social Hygiene Association, New York City

In 1921 steady and measured progress in the fight against venereal disease is shown in all progressive countries. The British dominions are to the fore in the struggle; Canada has fifty clinics; Australia has legislation. Denmark began this year a registration system; Scandinavia is active; Poland has a working organization; Czecho-Slovakia requires notification. Uruguay has a national tax to curb syphilis. Hawaii is conducting a campaign to check the spread of social diseases among children. In the United States activities are being carried into the rural districts; Negro physicians are cooperating; and Congressional failure to make appropriations is being overcome by local subscription.

A RETROSPECTION of venereal disease affairs during 1921 brings out no startling advance but indicates the slow, steady step of real progress. There has been a tendency toward standardization in the medical, in the legal, and in the educational phases of the problem. The regional conferences promoted by the League of Red Cross Societies have become a source for standardization of ideals. Inspired by the success of the All-America conference, the league undertook a number of others. The first one held in 1921 was the North European Conference on Venereal Diseases, which was attended by delegates from countries of that region. They discussed, in the main, the questions of compulsory notification and of treatment facilities for sailors. Resolutions recommended that: The questions of compulsory notification and treatment be decided by individual nations; medical students be required to be proficient in recognizing and treating venereal diseases; provision be made for such instruction of medical practitioners; regulation and official toleration of prostitution had been found medically useless; rescue homes are of value; and that recreational and educational measures be recommended.

Less Duplication Among Agencies

It is hoped that the Western European and the Southeastern European conferences, which are to be held in the near future, will be as successful as their predecessors, and that these conferences will succeed in bringing about a standard common to all nations.

Among the regular annual conferences was the International Conference of the Abolitionist Federation scheduled for November 3-5 in Rome. Dr. von Düring presented a timely paper on the compulsory treatment of venereal diseases.

The effect of standardization is felt also among the activities of the voluntary agencies of venereal disease control. There is less duplication and better coordination. In the United States the voluntary organization—the American Social Hygiene Association—and the federal and state agencies cooperate in their common interests. The agencies in Great Britain—the National Council for Combatting Venereal Diseases and the Society for the Prevention of Venereal Diseases—are less opposed than formerly. The League of Red Cross Societies deserves especial commendation. Since its inception it has sought to cooperate in the efforts of every nation that desires to eradicate venereal disease. It has not only conducted regional conferences but also many surveys of venereal disease conditions in various countries, notably Poland, Roumania, Czecho-Slovakia and Serbia.

Death Rate Decreasing

An analysis of venereal disease statistics reveals the same tendency toward standardization. In a recent paper on venereal diseases, the death rate for the ten-year period, 1911 to 1920, is given as 14.2 per 100,000 for syphilis, locomotor ataxia, and general paralysis of the insane, combined. The combined rate increased regularly from 11.0 in 1911 to 16.6 in 1917, this increase being registered not so much as a result of the increased prevalence of the diseases as of the greater effort made to have physicians report deaths from syphilis as such. Since 1917 the combined rate has shown a marked decline. During this period there has been no relaxation in effort to secure a true registration of syphilis deaths; the practice of reporting has steadily improved. It seems probable, therefore, that there has been a decrease in mortality from syphilis. It is significant that this decline is very marked in the case of syphilis, rather than in the others, which are late manifestations of syphilitic infection.

Significant, too, in venereal disease control is the resolution passed by the American Hospital Association to the effect that all general hospitals admit venereal disease patients and enter these diagnoses, as other diagnoses, on histories, whether primary or complicating, and also develop

sufficient dispensary service to provide care for the ambulatory cases and the ambulatory stages of the cases treated in the hospital. This is significant in that it marks the passing of the old attitude of discrimination against venereal diseases on the part of the institutions upon which the medical profession and the health authorities are compelled to depend, in a large part, for the ultimate control of gonorrhea and syphilis.

British Active in Fight

Of the foreign countries, the British dominions are among the most advanced in venereal disease work. In Canada, according to the latest report, there are fifty clinics. In the month of June, alone, there were 7,424 cases of venereal disease under treatment in clinics; 13,937 treatments were given, 1,914 Wassermann reactions performed, 366 smears made, and 3,497 patients were registered, to whom 34,727 treatments were given. As a result of the recent campaign in Quebec, secondary infections of syphilis are said to have decreased in a proportion of about fifty per cent.

In Australia five of the six states possess legislative enactments concerning the venereal diseases. The sixth state is considering a bill dealing with the same subject. Among other things, this bill provides that if a prisoner suffering with venereal disease persists in marrying, the commissoner may inform the other party. Any person who knowingly infects another shall be liable to a fine or imprisonment or both.

The board of sanitation of Roumania has made syphilis and gonorrhea notifiable in certain counties of the kingdom. The certificate of notification, which is required to be given, states age, sex, marital condition, occupation, stage of disease or duration. The individual is denoted by a number or other reference in the records of the medical practitioner who is notifying.

Czecho-Slovakia has also instituted the reporting of venereal diseases. This measure is in connection with the new bill on venereal diseases by which free treatment will be offered to all venereal patients.

Poland, too, is keeping abreast. The Association of Social Hygiene in Poland called a second meeting, which was held in Warsaw, October 30-31.

The Scandinavians observe the same advanced attitude toward the venereal diseases they show toward all their problems. In Denmark a system of registration was begun in June. The Wassermann reaction is carried out in only one institution and under state control. Since the taking of the Wassermann is concentrated to one point, it is easy to evolve a system of registration centering about this reaction. Although registration has existed but a half a year, about 10,000 persons are on the Serum Institute's registers.

A national tax for the benefit of a campaign against syphilis has been established in Uruguay. This serves the purpose of raising a sum of money as well as of bringing the problem before every citizen of that nation.

The territorial board of health of Hawaii launched its first campaign against venereal disease by opening a venereal clinic in Honolulu. The territorial legislature appropriated $15,000 for the maintenance of such a clinic, which is under the direction of the board of health with the cooperation of the United States Public Health Service. The campaign will be especially directed toward checking the spread of disease among children.

In the United States, there has been little change. The Sixty-sixth Congress stopped appropriations for the maintenance of the work of the Interdepartmental Social Hygiene Board, including apportionments to state boards of health for venereal disease control. Later, at a special session, $225,000 was appropriated with the restriction that this sum be used for the protective measures program. More than half the states have funds for diagnosis and treatment facilities, and to a large extent, the deficiency has been filled by local appropriations and volunteer funds.

Rural Districts Reached

The United States Public Health Service has conducted a rural health campaign, and during its fiscal year ending June 30, 1921, about 28,000 treatments against venereal infections were administered in the twenty-nine cooperative rural health districts. The service has also continued its cooperative work with the state boards of health in the development of 442 clinics, which were in existence at the close of the fiscal year. This number does not include a large number of clinics which are not receiving state aid, and which, therefore, do not report to the Public Health Service.

Progress in the effort to control venereal diseases is further evidenced by the activities of the American Medical Association. The cooperation of negro physicians and other colored leaders in the problem as it affects their people has been marked.

Improvement can never be effected unless it is supported by public enthusiasm. In 1919 the education of the public formed the foundation for venereal disease control. The year 1920 saw the structure in the course of development, and at the close of 1921 there is a fairly complete structure which is lacking mainly in elaboration of detail.

ACTIVITIES IN THE FIELD OF TUBERCULOSIS DURING 1921

By PHILIP P. JACOBS, Ph.D., Publicity Director, National Tuberculosis Association, New York

The saving of 80,000 lives is a yardstick on which the National Tuberculosis Association measures its progress for 1921. Other yardsticks that are applied by Dr. Jacobs in estimating the forward movement of the campaign against tuberculosis are the large increase in the number of hospitals and sanatoriums; establishment of preventoriums and summer camps; rapid development of traveling clinics; education of the public to a broad conception of the tuberculosis field and its relation to a general health program; sound organization of new local associations with full-time paid executives; reorganization of national association to give additional power to state associations.

THE most satisfactory measure of progress for the campaign against tuberculosis at the present time is the declining death rate. While the figures for 1921 are not available at this time, the report of the United States Bureau of the Census published in November shows that the death rate for 1920 reached the unusually low level of 114 per 100,000. Statistics from the Metropolitan Life Insurance Company, from state and local registrars in various parts of the United States, and the reports of the United States Public Health Service all indicate that the death rate for 1921 is considerably lower than that for 1920. Without attempting to speculate upon all the reasons for the decline in the death rate, public health authorities are agreed that the significant fall, first evidenced in 1919 and continued through 1920 and 1921, is due in large measure to the cumulative efforts of the fight against tuberculosis begun actively in 1904 when the National Tuberculosis Association was organized. If the death rate of that year, 200 per 100,000, had prevailed in 1921, there would have been 80,000 more deaths last year than actually occurred. As a measure of progress, the saving of 80,000 lives a year is the most easily comprehended yardstick.

A second yardstick that might be applied to measure the progress of the campaign against tuberculosis would be one that would show the increase in the number of agencies actively engaged in the fight against the disease. If, as can be reasonably well established, the increasing number of hospitals, sanatoria, dispensaries, nurses, open air schools, associations and other agencies for the fight against tuberculosis has contributed in no small degree to the present saving of lives from this disease, it is important to point out what are the yearly and bi-yearly gains in this field.

Taking first the number of hospitals and sanatoria, at the present time there are approximately 700 hospitals with nearly 70,000 beds. The gain during the present year is difficult to measure, but it has nevertheless been a significant one. In the seventeen years since the National Tuberculosis Association opened its office, the number of beds has increased seven-fold.

Related to the hospital and sanatorium is the preventorium and its companion, the summer camp. The increasing emphasis of tuberculosis organizations upon child health has led to a rapid development in the institutional facilities for children both in existing sanatoria for open cases and also in various types of institutions for closed or exposed cases. This latter group now numbers over fifty and has more than 2,000 beds. The preventorium, as its name implies, seeks to build the resistance of the child against the inevitable onslaughts of already latent tubercle. The preventorium is a bridge over which the child may traverse the dangerous chasm of environmental and other causes that would tend to break him down with tuberculous disease.

In the dispensary and clinic field, while there is a steady and satisfactory gain in the number of permanent clinics being established, probably the most noteworthy contribution is the rapidly developing number of traveling or itinerant clinics. The "clinic on wheels" is now a well established part of many programs in urban districts especially. Experience, however, has demonstrated that the automobile clinic is an unduly expensive piece of apparatus and it is probable that in the next few years this particular method may give way to a somewhat simpler plan already being tried in New York, Massachusetts and other states, viz., the visiting clinician, or, as it is sometimes called, the travelling consultant or occasional clinic. Here the expert in tuberculosis with a well trained tuberculosis nurse arrives in a community by train, trolley or automobile and after suitable announcement by an advance man, establishes a temporary "clinic" in a school,

church, hospital, or any other convenient place. No expensive machinery is necessary and no apparatus, except a portable scale, thermometers and the physician's stethescope. This method and the automobile clinic also are a studied effort to bring the facilities for examination to the individual and not to depend upon the individual to come to the clinic.

Tuberculosis Nurses Many

To measure the organization against tuberculosis, one might use the number of associations, national, state and local, as the best index. Today there are over 1,200 associations in this country. The tendency in the association field, however, at the present moment is not to multiply organizations unduly, not the creation of paper associations as was done a few years ago, but rather the establishment of sound organizations with full-time, paid executives in charge.

It is difficult and almost impossible to measure the number of tuberculosis nurses in the field at the present time. Of the more than 10,000 public health nurses now working in various parts of the country, it would be safe to say that fully 5,000 are doing some form of tuberculosis work. How many are doing tuberculosis work exclusively, it is impossible to ascertain. The number of nurses that are devoting attention to tuberculosis work is increasing daily. A few years ago the battle between those who contended for generalized nursing as opposed to specialized nursing in tuberculosis was vigorously contested. Today the problem is being solved in some communities, at least, by a proper compromise, whereby the nursing field is districted and public health nurses are given restricted territory and are expected to cover the field for all problems in the health field. On the other hand, such organizations, if they are properly conducted, see to it that tuberculosis and other specialties as well are given particular attention by having supervisors trained in these diseases.

It would be possible to continue this catalogue of agencies farther. Suffice it to say that there has been and is a steadily increasing development along all lines dealing with tuberculosis organization.

Tuberculosis a Family Problem

Mention has been made of the broader conception of the tuberculosis field. This increasing recognition of tuberculosis as a broad health program is evidenced in a number of different ways, as for example, first, in the increasing recognition of the child as a particular tuberculosis problem. The recent linking of the nutrition movement with the Modern Health Crusade and the

tuberculosis associations is a clear indication of this tendency. Second, the rapidly growing recognition of industrial problems and the responsibility of industrial organizations for their solution is in line with a broader development. The creation of a division of industrial research by the National Tuberculosis Association is a clear indication of this growing tendency. Periodic medical examination, not only of employees in industry but of everyone, is constantly gaining ground as a necessity of everyday life. The tuberculosis movement is making much out of this rapidly developing ideal. In the fourth place, there seems to be a growing recognition of tuberculosis as a family problem. For many years some tuberculosis workers have been pointing out the significance of this disease as a family problem, but only recently have the rank and file of workers begun to recognize the full significance of this preachment.

National Association Reorganized

No chronicle of last year's work would be complete without mention of the reorganization of the National Tuberculosis Association. When the National Association was founded, there were a few local organizations and fewer state associations. As the number of organizations has developed, however, it is natural to expect that they should in turn ask for an increasing share in the responsibilities and program of the National Association. The reorganization of the National Association effected last June provides for an additional sharing of responsibility by every state association. It does more than this; it definitely recognizes that state associations in order to assume responsibility for the development of the National Association must have standards of work that are fairly uniform and high.

Developments in Hospital Field

In conclusion of this brief survey, special mention should be made of certain developments in the hospital field particularly.

One of the most significant accomplishments of the last year has been writing into the Pennsylvania law the provision for county tuberculosis hospitals and the recent referendum vote at the November election by which seven institutions were created. The establishment of these hospitals indicates a complete reversal of Pennsylvania's tuberculosis policy originally announced in 1907. Instead of large state institutions and a highly centralized control, the new law and the new institutions recognize that tuberculosis is a local problem fundamentally and that its solution must rest ultimately in the local communities. There is need of state subsidy and state institutions, but these are not to take the place of necessary local ones.

The accompanying map showing institutional facilities in the United States is eloquent with regard to the distribution of hospital beds. Every state in the Union has some sort of hospital provision, except Wyoming and Utah, and the latter state has a provision after a fashion, but not in an exclusive tuberculosis hospital. To be sure, the provision in certain states does not touch the local problem, as for example in Nevada, but even in the most sparsely settled parts of the country there is an increasing recognition of the need for institutional care of tuberculosis.

More Preventorium Care Necessary

Mention has already been made of the increasing recognition of the need of preventorium care. The number of such institutions at the present time is indicated on the map. The oldest preventorium in this country is less than ten years of age. Most of these in existence at present have been established within the last three or four years.

The past year has also seen an increasing recognition of the standards of construction laid down originally by the American Sanatorium Association. The tendency to get away from the large, open ward and to provide accommodations that will give privacy as well as companionship is clearly being recognized in the newer hospitals, such as for example, the Detroit Municipal Sanatorium.

Still Far to Go in Fight

At the present time there are twenty-three federal hospitals for tuberculosis. Of this number eleven with 6,835 beds are exclusively for the care of ex-service men (figures include institutions operated by the National Soldiers' Home). The federal government also has in leased institutions and other government owned institutions 3,327 beds for ex-service men. Besides these there are twelve hospitals with 585 beds now being run by the United States government for tuberculous Indians exclusively, one of the newer and significant developments in the government's policies. The establishment of the Veterans' Bureau together with the efforts to coordinate hospital facilities should make for better institutions both in construction and administration.

The tuberculosis movement has progressed far, but it has still a long way to go. With over 120,000 deaths a year at the present moment and with well on to 1,000,000 active cases of the disease in the United States, the tuberculosis associations are not in position to sit back with a spirit of smug complacency. What has been done is an urge to go forward and "finish the job."

MENTAL HYGIENE IN 1921

By FRANKWOOD E. WILLIAMS, M.D., Associate Medical Director, The National Committee for Mental Hygiene, New York City

IT IS never safe to attempt to name the "ten best books" or the "ten best plays" of the season. Nevertheless, many do attempt it and their lists have interest and are frequently not without value. So in reviewing the progress of mental hygiene through the year 1921 one is tempted, even knowing the pitfalls, to list some of the "best" things—the most important piece of legislation, for example, the most important institution established, the most significant event, the most significant social study, and, most dangerous of all, the most important book. What is "most important" is always a relative matter, of course, and, hoping that this will be kept in mind, one ventures:

The most important legislation—two enactments of the Massachusetts legislature.

The most important institution—Institution for Defective Delinquents, Napanoch, N. Y.

The most significant event—the completion of arrangements for traveling psychiatric demonstration clinics for juvenile courts.

The most significant study—the mental survey of the children of Cincinnati.

The most important book—White's "The Foundations of Psychiatry."

The legislation in Massachusetts referred to provides (1) that all physicians who apply for license to practice in the state shall be required to pass an examination in psychiatry; (2) that whenever a person in indicted by a grand jury for a capital offense, whenever a person who is known to have been indicted for any other offense more than once or to have been previously convicted of a felony is indicted by a grand jury or bound over for trial, he shall be examined (through the agency of the state department of mental diseases) to determine his mental condition and the existence of any mental disease or defect which would affect his criminal responsibility.

Examinations in Psychiatry

The importance of these two laws (the first of their kind, I believe, to be passed in any state) can scarcely be overestimated. The teaching of psychiatry has been and still is in many medical schools woefully inadequate. It consists usually of a course of lectures (a minimal number of hours) on descriptive psychiatry, accompanied by a few vaudeville clinics in which are shown more or less chronic patients, usually of a bizarre type. As a result, the young physician enters upon practice with practically nothing that will be of service to him in the psychiatric problems he will very shortly have to meet. Instead, therefore, of becoming, as a general practitioner, the first line of defense in the prevention of nervous and mental illness, he becomes, more likely, a stumbling block. To prepare the general practitioner, who first and at the most opportune time, sees the future mental patient so that he may be equal to his opportunity is one of the most important problems in mental hygiene.

The second law is an attempt to strike at a social difficulty near to its source. All studies of prison populations have shown without exception that among prisoners there is a high percentage of deviation from a normal mental and nervous condition. The percentage of deviation has been highest among the recidivists, or repeaters. There is a presumption, therefore, that an individual who appears before a court for the second or third time charged with a serious crime is not nervously or mentally sound and that there may be a relationship between his nervous or mental condition and his repeated criminal acts. Before proceeding, therefore, with the expense of trial, the obvious step will be taken of finding out from another branch of the state service whether the individual is suitable for trial. If not, he will be removed from the court treadmill and a disposition made in keeping with his mental condition.

Other legislation of importance during the past year has been the establishment of a new children's code in Connecticut; the creation of a state commission in South Dakota for the control of the feeble-minded; provision in Virginia for the committment of individuals on trial, where a question of mental condition is raised, to a state hospital or school for the feeble-minded for observation.

Defective Delinquents

The Institution for Defective Delinquents at Napanoch, N. Y., is named as the most important institution opened during the year for the reason that it is the first of its kind. The need for such an insitution—thus relieving both the reformatories and the schools for the feeble-minded of a part of their population that cannot be assimilated and that interferes seriously with both in the performance of their proper functions—has been recognized for some time. Massachusetts has had a statute for a number of years re-

quiring that defective delinquents be committed to an institution for defective delinquents, but the institution has never been built. Other states will watch with much interest the experience of New York as the problems of this new type of institution are worked out, and if, as is expected, the experiment is successful, will follow in the erection of similar institutions.

Other institutions of importance that have been opened or authorized during the year are the schools for the feeble-minded in Florida, Alabama, and West Virginia, and new state hospitals at Torrence, Pa., Rusk, Texas (colored), Wichita Falls, Texas.

Juvenile Court Clinics

During the year there has been under discussion and plans have finally been completed for the organization of one or more traveling psychiatric clinics. The clinics will be under the direction of the new Division of Delinquency of the National Committee for Mental Hygiene. Each clinic will consist of a psychiatrist, a psychologist and a psychiatric social worker. Upon invitation, the clinic will establish itself at a juvenile court and for a period of probably three months will demonstrate, by working with the court, the function of such a clinic; at the same time instruction will be given to local physicians, social workers, probation officers and others in the problems and conduct of the clinic, so that at the end of the demonstration period the clinic can be continued through local effort. Demonstrations by each traveling clinic will be made in three or four cities in the course of a year. The result should be the establishment of a very considerable number of clinics in juvenile courts in the next few years which will mean getting at delinquency a little nearer its source. The psychiatric study of the delinquent, generally speaking, has worked back from the prisons for adult criminals through the senior reformatories, the junior reformatories, the adult courts, and, finally, the juvenile courts.

The Cincinnati Survey

Surveys, both for the insane and for the mentally defective, become each year more intensive. The early surveys were extensive; conditions were so backward in the care and treatment of the insane or so untouched in the care of the mentally defective that a general bird's eye view of the conditions in a state seemed necessary in order that first steps might be taken. Such surveys are still necessary, but opportunities become greater each year for more intensive studies. In Cincinnati a survey has been made, covering the schools, courts, delinquent and charitable institutions and agencies, by a corps of psychiatrists, psychologists, and psychiatric social workers, under the direction of Dr. V. V. Anderson of the National Committee for Mental Hygiene. The individual studies have been as complete as it has been possible to make them, including not only psychological tests of intellectual ability, but a family study, an industrial, educational and social study and a study of the personality.

Mental deficiency surveys have been completed during the year in Wisconsin, Maryland, Missouri, West Virginia, and have been begun in Arizona, South Carolina, and Louisville, Ky. Similar surveys were made during the year in Philadelphia and Cleveland. Surveys of the insane have been made in Oregon and New Jersey.

Dr. A. Warren Stearns of Boston made a special study during the year for the National Committee for Mental Hygiene of suicide in Massachusetts. His report will be found in the October (1921) number of Mental Hygiene.

The Most Important Book

Of course, it is impossible to say that any book is the most important one. Books are written for different purposes and from different points of view and cannot, therefore, be compared. The most inaccurate and most misleading book of the year might be rated as the most excellent were literary qualities the criteria of judgment. The year has brought forth a number of valuable books—Paton's *Human Behavior in Relation to the Study of Educational, Social, and Ethical Problems;* Rivers' *Instinct and the Unconscious; a Contribution to a Biological Theory of the Psychoneuroses;* Miller's *The New Psychology and the Teacher.* But one can say that White's *The Foundations of Psychiatry* is an important book; should be read by all physicians and its reading should be required of all medical students.

While the events recorded above are in some ways the most significant of the year, there have been other events that need to be reviewed.

The problem of the care and treatment of the ex-service man suffering with nervous or mental disease remains a matter of humiliation. Little progress has been made. One must report, as has been reported before, an inadequate number of hospitals, inadequate hospitals, inadequately trained personnel, official and professional pessimism. There is, however, a ray of hope. Dr. Douglas A. Thom and Dr. H. Douglas Singer, advisory consultants to the United States Public Health Service, after a study of the situation, have made a report carrying definite recommendations.*

*The Care of Neuro-psychiatric Disabilities; Some General Considerations and Recommendations. By Douglas A. Thom, M.D., and H. Douglas Singer, M.D. Public Health Reports, Vol. 36, No. 43, October, 1921.

Drs. Thom and Singer point out that the problem divides naturally into two parts, the problem of the insane ex-service man and the problem of the ex-service man who is not insane but is suffering from some form of nervous disorder. For the former group more hospitals and adequate hospitals are recommended; for the latter group an extensive organization of out-patient clinics, properly staffed, in the belief that hospitalization, except on occasions and for a comparatively brief time, is harmful to these men and that they can best be cared for by active treatment in out-patient clinics. The importance of well-trained psychiatric social workers is also emphasized and the proper place of occupational therapy, as distinct from vocational training, in the treatment of nervous and mental patients.

Differences of opinion have arisen from time to time as to the type of training best suited to equip individuals to handle problems of conduct disorder. Is maladjustment a problem for the psychiatrist or the psychologist, or for both, and in what relationship? With the development of what has been called "clinical psychology," the discussion has become more acute. In order, therefore, that the relation of psychiatry to psychology might be discussed and, if possible, that a common understanding might be reached, a conference of representative psychiatrists and psychologists was called during the year by the Division of Psychology and Anthropology of the National Research Council. Following the meeting, F. Lyman Wells, one of the representatives from the American Psychological Association, was delegated to draw up a report of the conference which would reflect the different points of view presented and the consensus of opinion of the conference in so far as that might be possible. Dr. Well's report will be found in the January number of Mental Hygiene; his conclusions are as follows:

"The main conclusions that seem to emerge are that psychometrics is the task of technical experts who often are not and seldom need to be psychologists in the broad sense that ought to attach to the term. It is doubtful if the problems of clinical or pathological psychology are such as to support an important professional group independently of medical foundation. Medical discipline gives the best background, and an all but requisite type of background, for inquiries involving the major affective life of individuals. There is no fundamental conflict between psychology and medicine; it arises among physicians, on the one hand, and psychologists who are masters of certain medical techniques and occupied with certain medical problems that medicine has not assimilated. Medicine should assume greater responsibility for them, then the conflict will disappear. Meanwhile the administrative duty of psychology is to develop progressively higher standards in training and accomplishment and, within those limits where reasonably accurate judgment is possible, means of attesting those who meet these standards. That this can and should be done on the psychometric level seems clear. On the level of the independent consultant, one must distinguish carefully between measures that further the services of psychology to society and those that seem primarily for the interest of a professional group. The latter policy would certainly be without value, and might be disastrous, to the standing of the profession as a whole."

The bureau of Statistics of the National Committee for Mental Hygiene reported during the year its third census of patients with mental disease, mental defect, epilepsy, alcoholism and drug addiction.† The object of the census was threefold: (1) to ascertain the total number of patients receiving treatment on January 1, 1920; (2) to furnish a basis of comparison with the 1920 census of the general population of the country; (3) to show the changes that have taken place in institutional care since 1910. The total number of patients was found to be 232,680; the per cent of increase of the general population since 1880 has been 110.8, while the per cent of patients with mental disease in the institutions has been 468.3; the most significant changes in institutional care have been in the establishment of new institutions for the care of mentally defectives, particularly in the South, and the discontinuance of hospitals for inebriates.

An intensive study of mental diseases in twelve states during 1919 was reported later in the year by Dr. Pollock and Miss Furbush.‡

Statistics in regard to the feebleminded now in institutions are in a condition as unsatisfactory as were the statistics in regard to mental disease a few years ago. Through the cooperation of a committee of the American Association for the Study of the Feeble-minded and the Bureau of Statistics of the National Committee for Mental Hygiene, however, a uniform statistical system is being introduced into the feeble-minded institutions that will soon make available reliable statistics in regard to admissions, expense of operation, movement of population, mental status, nativity, citizenship, age, marital condition, environment, economic condition of family, and admissions, together with information relative to the discharges and deaths.

†Patients with Mental Disease, Mental Defect, Epilepsy, Alcoholism and Drug Addiction in Institutions in the United States, January 1, 1920. By Horatio M. Pollock and Edith M. Furbush. Mental Hygiene, Vol. 5, No. 1, January, 1921.

‡Mental Diseases in Twelve States, 1919. By Horatio M. Pollock and Edith M. Furbush. Mental Hygiene, Vol. V., No. 2, April, 1921.

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ACHIEVEMENTS OF THE YEAR

THE MODERN HOSPITAL counts itself fortunate in being able in this issue to place before its readers a group of twenty-one articles reviewing the activities of the past year in the hospital field in this country and, to some extent, abroad. The articles deal avowedly with achievements and constructive plans for the future. Little or nothing is recorded of disappointing failures, vexatious delays, regrettable omissions; although beyond doubt these were experienced in greater or lesser degree. But there is evidence enough in this issue to draw an acknowledgment from even the most pessimistic that a goodly amount of admirable work has been done. One can turn to almost any phase of the hospital field and find good reason for encouragement. Take, for example, the standardization movement in so far as the work of the American College of Surgeons is involved. During 1921, according to the records of the College, the number of hospitals of 100 beds or more, grew in the United States and Canada from 697 to 761, and 573 are now on the College's approved list. In other words, 75 per cent of the hospitals in this class are now on the list, a gain of 18 per cent—not a bad showing. For Canada, moreover, Dr. T. R. Ponton, who made a survey during the summer of every general hospital in Canada of fifty beds and over, reports that on every hand the hospitals "were not only ready to accept the minimum standard, but enthusiastically anxious to have it established as quickly as possible." Of the hospitals of 100 beds and over in Canada, 62.7 per cent have reached the minimum standard, and in five provinces all of the hospitals in this class were included in the American College of Surgeons' list for this year.

Without attempting to vie with or encroach upon the work the College has mapped out for itself, the American Hospital Association has taken official action on several policies relating to hospital operation, which, while not characterized as standards, and perhaps purposely so, will have a marked influence in improving the administration of our institutions. One cannot think of the past year's work of the American Hospital Association without thinking of the report of its committee on hospital forms and records. A broad application of the principles enumerated in this report will be of untold benefit to our hospitals, and there are signs on every hand that this broad application is now being made.

Did space permit, one might comment on the encouraging progress that has been made in dietetics, nursing, social service, occupational therapy, etc., but we must let the review articles tell their own story. Suffice it to say they contain much that will send hospital workers into 1922 with renewed hope and revitalized effort.

THE PRESENT STATUS OF HOSPITAL STANDARDIZATION

MONDAY, October 24, 1921, was a significant day for hospital standardization in the United States and Canada, demonstrating as it did the deep interest which the movement holds for both lay and professional classes. It was the occasion of the hospital conference in connection with the Clinical Congress of the American College of Surgeons at Philadelphia, and during each session the hall was crowded with listeners closely attentive to each address and its subsequent discussion.

The fourth survey report, as presented to the convention, was most gratifying, the increased number of hospitals that measured up to the minimum standard indicating material improvement in hospital service in both countries.

Certain deductions might have been drawn by the interested observer from that day's meeting, among them a conviction that hospital standardization, gathering greater momentum year by year, is a permanent growing movement, not a passing fancy. For in that assemblage of hospital workers the movement nowhere encountered op-

position; apathy and indifference were only occasional. The movement, it would seem, pleases all groups interested in hospital service by its simple practicality and reacts to the benefit of hospital official, physician and patient alike.

No doubt remains that through abler diagnoses and more intelligently applied treatment better results are obtained than formerly, and that if one would gather statistics from hospitals meeting the minimum standards he would find the following results: Lowered death rate; reduced number of operations; fewer complications and post-operative infections; and, finally, lessened days' stay of patients.

Indeed, two prominent hospitals have already prepared statistics on this subject which are instructive.

Hospital No. 1 had, in a given type of case, before standardization, 62 per cent operative cases. Now under standardization for the same period of time and in the same type of case statistics show that only 47 per cent were operative. Deaths before and after standardization, in a given group, have been reduced from 49 per cent to 28 per cent.

In Hospital No. 2, before standardization, 44.4 per cent of cases at a given time were operative. Under standardization this was reduced to 30.5 per cent. Deaths fell from 3.3 per cent to 2.4 per cent.

It is also evident that standardization has created a deeper sense of responsibility in all of those concerned with the care of the sick. The administrative staff sees more clearly its duty in guarding the welfare of the patient. The medical staff is eager to avoid mistakes, is anxious to obtain the best possible results and seems to take a more constructive interest in the hospital's efficiency. The board of trustees realizes that it has a deeper responsibility than simply directing the finances of the institution; its members can, under standardization, consider monthly reports in the terms of physical assets and liabilities. The public, too, is inquiring into the status of hospitals regarding standardization, that it may make its selection on that basis. And finally, governmental and municipal bodies, usually the last to move, are betraying interest in the movement as a guide to a hospital's worthiness for financial assistance.

Hospital standardization means not only better service to the sick but national economy. Every day of non-production retards national progress. If a patient can be restored to health more quickly it means adding materially to nation's wealth and development.

The future of the hospital standardization program can but be promising.

THE SIGNIFICANCE OF THE DISPENSARY

THE extent of dispensary medical practice in the United States has grown tremendously in the last few years. Not only are there a greater number of out-patient institutions providing free or practically free service to the poor, but there has developed in many institutions similar service in pay clinics for persons of modest income who, though not in need of or desirous of medical charity, find in these pay clinics a type of medical service heretofore unobtainable. Dispensaries have become important factors in the promotion of certain public health programs such as those dealing with tuberculosis and the venereal diseases. These developments may be taken as one indication of the trend of medical practice away from individualistic to organized practice.

Dispensary medical service is organized and, hence, economical service. It is economical service from the standpoint of the patient in that it affords him ready access to whatever type of diagnostic or therapeutic service he may need. It is economical service from the standpoint of the physician, since it affords him essential aids to diagnostic and treatment work as: Ready access to consultants, available laboratory service of various types, and clerical aid, all of which make for the most productive use of his time. It is economical service from the standpoint of the community because by treating patients in the incipient stages of disease it, in a measure, prevents the economic losses due to chronic illness; because it provides for the use of expensive plant and equipment in the service of a large number of patients; and because it saves expensive hospital service. Obviously these economies obtain only in the better dispensaries and hospital out-patient departments, but they are within the range of every worth-while general dispensary.

Since so much that is good can come out of a dispensary, why is it that in very great degree dispensary service is often inefficient? Medical service being dependable to a considerable extent on human factors—physician, patient and community—is extremely variable as to product or result. This variability is perhaps more likely to typify dispensary medical service than the average private practice. In the dispensary there are likely to be a somewhat lesser interest and responsibility on the part of the physician and a somewhat lower grade of intelligence on the part of the patients, both of which conditions tend to lessen the value of the end result. That there are many noteworthy exceptions hardly needs to be said. Two conditions prevail in many dispensaries which invariably make for inefficient work.

One is the excessive number of patients which the physician must see, often so many that he can give each but scant attention. The other is that patients either have to wait for hours for service which, because of the pressure upon the physician, may be inadequate, or they are dismissed with a prescription or with the instruction to return another day. This state of affairs makes for anything but a satisfied and cooperative clientele.

Most dispensaries are poor. They lack the funds with which to purchase essential equipment and service. But back of their poverty lies the fact that they have little support from their communities because the public does not know the dispensaries or the great good they could do if adequately supported. Few communities have been sold their out-patient institutions. Hospitals have not been prone to emphasize the needs of their out-patient departments, and hospital budget makers are likely to find all the money gone before they reach the out-patient department which, because it is usually located in the basement, quite naturally finds its place at the bottom of the list.

Today it would seem that those conditions which make for inefficiency in dispensary service are passing. The rapid increase in the number of dispensaries and the extension of dispensary service to others than charity patients are bringing needed publicity. There are some dispensaries which have obtained sufficient support to make it possible for them not only to do efficient work but to demonstrate methods by which efficiency may be reached. By developing special clinics, by cultivating closer relationships with hospitals, by providing social service and adequate follow-up, and by establishing paid staff positions they are securing a more interested and valuable medical service. By developing social service departments and by cooperating with various community social agencies, public health nursing associations and the like, they are carrying to completion an increasing percentage of their therapeutic work. As agents of great public health movements they are a means of growing importance in health education and disease prevention.

PERUSING ADVERTISEMENTS

THE other day one of our callers made the casual but somewhat cruel remark that he found the advertising pages of THE MODERN HOSPITAL more interesting and helpful than the text pages. To us of the editorial department this remark was somewhat disconcerting, but when we stopped to consider the importance to the hospital superintendent and the diversity of the products set forth in those pages, we were forced to concede that our friend's contention was not without some ground, and that the hospital superintendent who read the advertising section of the magazine was bound to be helped by it.

Most of our advertisers are keenly desirous of meeting the exacting needs of the hospital field. They are not only open to suggestions for bettering their products from the men and women who are making daily use of them, but they eagerly take the initiative in seeking helpful advice and constructive criticism. There is an advertisement in this very issue, by the way, which offers a substantial prize for a practical suggestion, born of experience, as to how a manufacturer can improve his product, and thereby serve hospitals more effectually. This attitude should commend itself to our readers, and lead them to make an even more thorough examination of the advertising pages of THE MODERN HOSPITAL than they are already in the habit of doing.

HEALTH EXPOSITION IN KENTUCKY

A National Health Exposition, occupying 60,000 square feet of floor space, will be held in the Jefferson County armory at Louisville, Ky., February 1-9. The exposition is under the auspices of the United States Public Health Service, state board of health of Kentucky, Jefferson County board of health and the health department, Louisville. It will include exhibits in hospitalization, nursing, dentistry, medicine and pharmacy. The University of Louisville, the public school system, and various local, state and national health organizations will participate.

In connection with the exposition will be held the annual conference of the city and county health officers, the annual convention of the Kentucky State Public Health Association and other health meetings.

An institute will be conducted by the United States Public Health Service at the same time and its program will include addresses by the following:

Dr. M. J. Rosenau, dean of the Harvard School of Public Health; Dr. Josephine Baker, director of the department of child hygiene, New York City Board of Health; Dr. William A. Evans, former health officer of Chicago and public health editor; George T. Palmer, president of the Illinois Tuberculosis Association and director of the bureau of tuberculosis of the Illinois State Board of Health; Dr. Frederick E. Greene, secretary of the council on health and public instruction, American Medical Association; Dr. Valeria H. Parker, director of the Interdepartmental Board of Social Hygiene; Dr. John H. Stokes, syphilographer of the Mayo Clinic; Dr. Frankwood Williams, director of the National Association of Mental Hygiene; Dr. W. S. Rankin, state health officer of North Carolina, member of the council of health and public instruction of the American Medical Association and recent president of the American Public Health Association; Dr. John Dill Robertson, health officer of Chicago; Dr. John R. McDowell, director of health for the Lake Division, American Red Cross; Dr. John R. McMullen, United States Public Health Service; and Miss Frances Brink, director of the National Organization for Public Health Nursing.

PUBLICITY—THE ANSWER

By M. E. MONTAGUE, Assistant Secretary, Broad Street Hospital, New York

COOPERATION that tends to efficiency and progress in hospital work cannot be effected either from within or without unless there is a clear conception of the needs of the community and the capacity of the institution to meet those needs.

Briefly, what is needed in obtaining the cooperation of a district for the support of a hospital is a survey of the hospital and of the medical situation in the district, and then an unbiased and true presentation of what is found.

Hospital boards of directors and superintendents are realizing more and more each day the need of laying aside their time-honored prejudice against publicity and of securing a closer contact between their hospitals and the public.

In the recent campaign of the Broad Street Hospital, for the enlarging of its hospital facilities, a million and a half people had to be told of the hospital (it had been in operation only four years), if they were to come to its assistance.

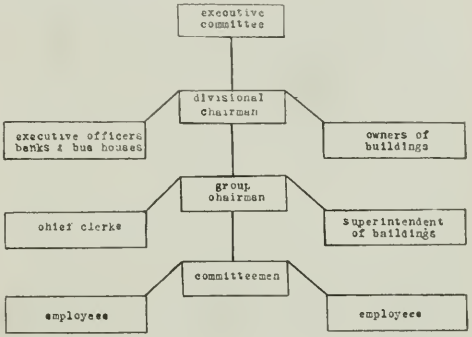
The contact was effected through a body formed of all the varied interests of this large business center, which through its committees was to reach out to every element in the conglomerate whole. What should this body of men and women represent—a campaign for funds?

Educational Campaigns First

Here was a district that had responded to thousands of appeals—appeals for Chinese and Russian relief, for missionary work in India, and for the suffering children in every country on the face of the globe—a district overburdened by campaigns and appeals. Thus, the establishing of the Down Town Hospital Association for the creating of a community spirit became necessary, and its slogan was "Downtown is our Town, and it's a real Town." This was the spirit which it was necessary to create, and an educational campaign as to the needs of the district and the needs of the hospital was put into effect for two months before the intensive campaign for funds.

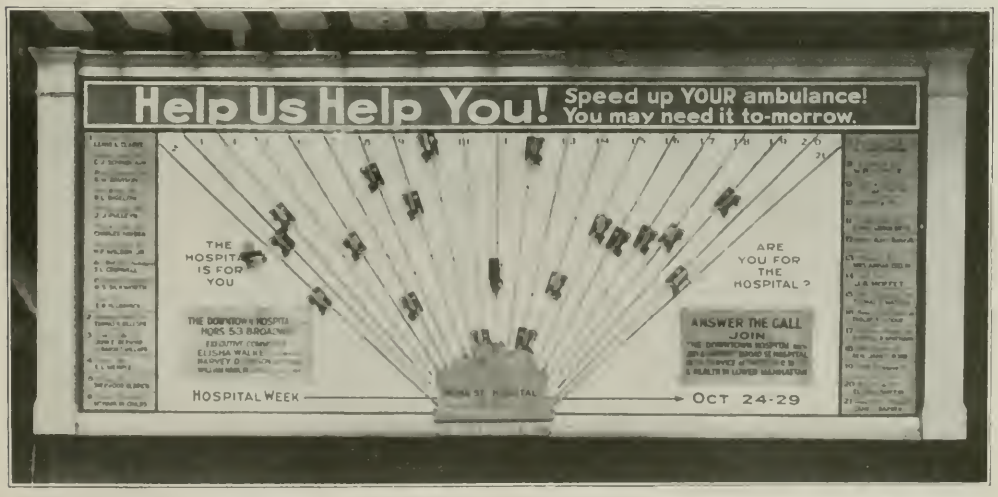
The outline in brief of this educational campaign was as follows:

Each divisional chairman appointed his group chairmen, who in turn appointed their committees. The divisional chairman was responsible for the educating of officials of large banks and business houses in the district as to the purpose of the Down Town Hospital Association and the obtaining of their cooperation in acting as members of a sponsoring committee for the association.

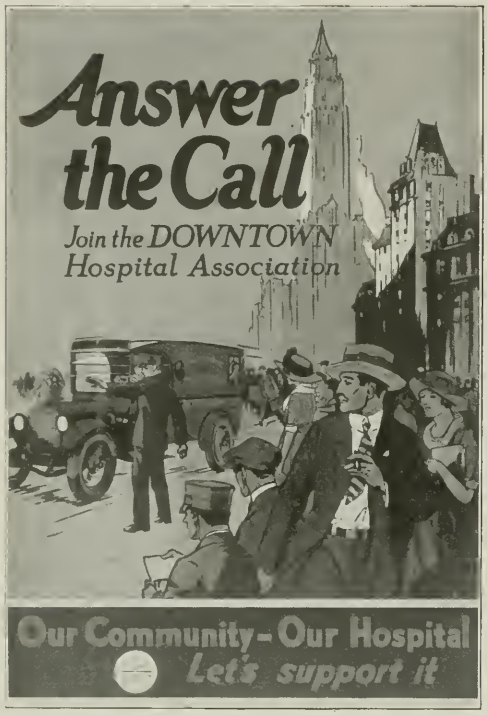


The group chairman was responsible for arousing the interest of the chief clerk or other officials in direct charge of all male and female employees, and through them to get information and literature passed on to the employees. The committeemen were called upon to address these employees and were responsible for the follow-up work.

This is best explained by the above diagram.



An ambulance chart placed on one corner of Broad and Wall Streets registered the daily progress of the drive.



Posters in vivid colors attracted the attention of downtown New Yorkers to the campaign.

Following this was the intensive publicity work. Huge banners were hung across the principal streets bearing the inscription "Downtown is our Town, it needs our help." Posters were placed in the windows of banks and business houses in the district. Ambulances also carried one of these posters on either side; the psychological effect in this instance was all that could be desired.

Permission was obtained from all of the clubs, restaurants and tea rooms to place stickers explaining the purpose of the association on their menu cards; approximately 100,000 of these stickers were used.

Yet, even with these ramifying committees of the association and the publicity through pamphlets, posters, banners and buttons, the work of raising $1,000,000 could not be accomplished without the most important agent of all—newspaper publicity.

Newspaper Publicity Most Important

There was no over-riding the laws of professional ethics. Material was carefully edited before it was sent out by the association, and in cases where newspaper reporters were invited to the hospital, prepared notes were given to them so that in their haste they might not fall into misstatements or exaggerations.

One thing was definitely established: That the newspapers could be trusted to give great assistance to a movement the worthiness of which, they, themselves, were convinced. If real news written in their own style were sent to them it was certain they would print it. A number of them were among the large subscribers to the fund.

Of course, the best plan of presenting a hospital to the public would be to let the public come to see the hospital. But this was an obvious impossibility. There was, however, no reason why the hospital might not be opened to the reporters and photographers upon occasion so that through the guidance of a publicity chairman they might prepare articles on what attracted them most. Figuratively the walls were taken down, and the institution was exposed to the study of all who were interested in it.

Viewed in perspective, the hospital was interesting from the first floor to the seventh. The problems of its financing offered a theme for development for public information, as did the little infantile paralysis victims that came to its dispensary.

In this way a survey was made not only of the hospital but of the district, and this survey which was briefly outlined in the October number of this magazine proved as interesting to the newspapers and the general public as it did to the hospital executive. In fact, some of the data had publication as far west as Colorado.

Hospital Appeals Must Vary

What has happened since has justified the decision that publicity is the important agent for the performance of the work, but no two hospitals should use the same appeal. It may seem to be exactly alike at first glance, but a close examination should reveal a dozen points of difference, any one of which may mark the turning point between failure and success. Between the science of advertisement and the art of selling an idea there is much the same difference as between studying surgery in a university and practicing it in an operating room. This was demonstrated in the use of a charting board for team contributions. The psychology of public competition is unquestionable, but the usual clock and thermometer system of recording the progress of the different teams had been used promiscuously in this district. Hence, the use of a chart. This carried out the same idea, presented in a new way. The chart was placed on the most conspicuous corner of the district, the corner of Wall and Broad Streets. Each team captain was represented as a volunteer ambulance driver with a command to "Answer the Call" to the hospital with his quota. Each ambulance was numbered, and the corresponding number with the name of division and driver was shown on each side of the chart. Each day the ambulances were moved

Broad Street hospital ambulances were placarded with the appeal of the Downtown Hospital Association which told lower Manhattan of the need of additional hospital protection.

A banner hanging over Broadway in the shadow of the Woolworth Building told countless thousands of New York's great downtown community that the Downtown Hospital Association was raising $1,000,000 for Broad Street Hospital.

by an amount corresponding to the subscriptions of the division for the day.

The result of education on the cause of Broad Street Hospital has been education on the general idea of the value of hospital protection, and the Downtown Hospital Association will now remain a permanent body, interested in the civic welfare at Downtown New York, and the financial director of the Hospital.

THE UNITED HOSPITAL FUND OF NEW YORK

FREDERICK D. GREENE, General Secretary.

The United Hospital Fund of New York has made its forty-second annual presentation of the needs of the fifty-seven leading non-municipal hospitals of the city which are members of the organization. The collection it has been receiving through its active executive committee is not yet complete and will not be until the forty-third annual report is made a year from now, for the Fund receives moneys continually. Months afterward contributions reach headquarters as a direct result of the intensive effort to present the hospitals' needs completely and vividly in the closing weeks of the calendar year.

The presentation, however, of the needs of the hospitals, especially in relation to the free service rendered to patients unable to pay for treatment, has been unusually interesting aside from its direct receipt of moneys for distribution to the various institutions.

The officers of the United Hospital Fund, who are Robert Olyphant, president; George Blumenthal, vice-president; James McVickar Breed, secretary; and Albert H. Wiggin, treasurer, having received a survey of the hospital situation through the preceding year's report, were fortunate in inducing William Fellowes Morgan, president of the Merchants' Association, to accept the chairmanship of the executive committee for purposes of presenting the Fund's appeal to the public.

The first task of this committee was one of organization. In each hospital a public-spirited man or woman consented to become a captain to direct the collection among the friends of that particular institution. Each captain selected ten or more volunteer workers whose duty it was to call personally upon at least five prospective contributors to the Fund.

It was felt necessary, however, that the case of the hospitals be presented by groups more representative of the hospitals than the particular friends of the hospitals themselves. With this in view, committees were organized in various trades and professions with a leader in each respective field as chairman. These committees were bankers and brokers, real estate, building trades, jewelry, metals, drugs and chemicals, china and glassware, cotton exchange, dry goods, paints and varnishes, public utilities, and tobacco.

Lists of all preceding collections were gone over and every man or woman who had contributed at any time was assigned to a worker. These prospective donors were not assigned haphazardly, but the workers were privileged to choose the persons upon whom they would call, for it was believed that far better results could be obtained if the case of the hospitals were presented to each individual by someone whom he knew personally. "A personal appeal" was made the keynote of the effort.

Arrangements were made that contributions or pledges should be sent direct to office of the treasurer, Mr. Wiggin, at 57 Broadway.

An independent committee was organized for the borough of Brooklyn, with James H. Post as chairman and Edwin P. Maynard as treasurer. This was done because the inclusion of the Brooklyn hospitals in the Fund was comparatively recent and because it was felt that the justly celebrated pride of Brooklynites in their borough would be given an opportunity to display itself. Brooklyn contributions were sent direct to the Brooklyn treasurer at 177 Montague Street.

Mayor Hylan, on November 26, proclaimed the period extending from November 28 to December 3 as Hospital Week for the benefit of the United Hospital Fund, and the carrying of the message of the hospitals to the public was under way. Street banners, posters and newspaper advertisements appeared. The newspapers began the publication of a series of informative articles covering the work of the hospitals giving free care to the sick and injured. Bizarre methods of merely attracting attention were avoided, for it was believed that every article printed should have a definite, result-getting appeal. Editorial writers on most of the leading publications gave their hearty indorsement to the appeal.

Funds began to pour into the treasury as the workers appealed to one prospect after another. Money is still coming in and no date has been set for stopping it. The hospitals need every dollar they can get for their free treatment and they need it the year round.

In the midst of the presentation, Dr. E. H. Lewinski-Corwin, secretary of the public health committee of the Academy of Medicine, made his report on the survey of hospitals in Greater New York. His recommendations corroborated the conclusion of the Fund's workers, that the institutions should cooperate still more closely through a central agency such as the United Hospital Fund and that such cooperation, including the presentation of the case of the hospitals to the public, should not be spasmodic but continuous.

HOSPITAL LIBRARIES FOR INTERNS*

By HORACE GRAY, M.D., Boston, Mass.

THE embryonic state of hospital libraries in general seems to justify a report covering even so limited an experience as that in a single town. The viewpoint of the expert librarian has been presented, among others, by Mrs. G. W. Myers, under whose superintendence the Treadwell Library at the Massachusetts General Hospital has become such an asset to the visiting staff, to interns, medical students, nurses, social workers, and also to many of us outside practitioners who from time to time have been permitted to make use of that attractive and up-to-date library.

From the universal standpoint of all the above groups of workers, the value of a hospital library may be conveniently summarized by a few excerpts from Mrs. Myers' articles: "It is a room for study and for rest, for meetings and for consultations, and with sufficient material at hand to settle discussions and difficulties without delay. . . . Lists of all publications by members of the staff should be kept, and reprints of periodical articles by them obtained and catalogued. Reviews of their books should be noted and references kept. . . . Many hospitals do not appreciate the extraordinary value which their clinical records have as a basis for medical research. . . . The constant skimming of journals and books grows to be a work of intense interest. . . . Librarians are expected to be walking encyclopedias, funds of general information, complete spellers, pronouncers, and definers of all the many-syllabled words contained in medical nomenclature."

Hospital libraries for interns may be said to differ from libraries in general only in representing a minimum standard. This may be stated to include at least the following desiderata:

1. Situation on the spot, either in the hospital (Boston City Hospital, Massachusetts General Hospital, etc.), or directly across the street (Harvard Medical School Library, immediately accessible to the Peter Bent Brigham Hospital, which contributes to the support of this library).

2. Hours open: morning, afternoon, and evening. During the evening and other hours when the librarian is off duty, the Medical School has arrangements with certain students to be on hand.

3. Librarian in charge whose training fits her for the demands made on her, as pictured in the quotation above.

*For information regarding their respective libraries I am indebted to Mrs. G. W. Myers (Massachusetts General Hospital), Miss J. E. Sweeney (Boston City Hospital), and Miss F. N. A. Whitman (Harvard Medical School).

The medical library of the Boston City Hospital.

4. Card index of books.

5. Display shelves or racks for periodicals, not drawers or cubby-holes. The greater space and expense are amply warranted by the increased inducement to those interns who think themselves too busy to pull out journals from pigeon-holes.

6. The most authoritative reference books and period-

The Treadwell Library, Massachusetts General Hospital

icals. The following list is offered as suitable for a minimum library, whether planned for house officers or for the practitioner who does not live in a medical center. In order to keep the list within bounds, no attempt has been made to include foreign languages or any society transactions or bulletins. Asterisks have been put against the most indispensable.

Expenditures of money available for books may well be further governed by the following principle: Medical books become superseded in an extraordinarily short time, sometimes defined as only ten years, and even believed by some of the best informed physicians to be less. This principle may be put into practice in three ways:

(1) By at first expending only a portion of one's book money and reserving the remainder for the most progressive publications of the next four years or so.

(2) By picking up at second-hand, and probably at about one-third cost, standard works duplicated or discarded by such growing libraries as that of the Harvard (or other local) Medical School, or the Boston Medical Library.

(3) If shelf space is limited, by discarding annually a few old books to make room for a few of the most up to date.

BOOKS*

Asterisks indicate those suggested as a nucleus.

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Bassler, A.: Diseases of the Intestines, Phila. and London, 1920.

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*Hazen, H. H.: Syphilis, St. Louis, 1919.

Head, H.: Studies in Neurology, 2 vols., London, 1920.

*Holt, L. E., and Howland, J.: Diseases of Infancy and Childhood, N. Y., ed. 8, 1920.

*Holmes, G. W., and Ruggles, H. E.: Roentgen Interpretation, Phila., 1921.

Howell, W. H.: Text-Book of Physiology, Phila. ed. 7, 1919.

Jones, R., editor: Orthopaedic Surgery of Injuries, 2 vols., London, 1921.

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Kanavel, A. B.: Infections of the Hand, Phila., 1916.

*Keen, W. W., editor: Surgery, Phila., 8 vols., 1921.

Kemp, R. C.: Diseases of the Stomach, Intestines and Pancreas, Phila. and London, ed. 3, 1917.

Keyes, E. L.: Urology, N. Y., 1917.

Lambert, A. V. S.: A Terminology of Diseases to Facilitate the Classification of Histories in Hospitals, N. Y., ed. 2, 1919.

*Lewis, Thos.: Clinical Disorders of the Heart Beat, London, ed. 2, 1914.

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Locke, E. A.: Food Values, N. Y., 1913.

MacCallum, W. G.: Textbook of Pathology, ed. 2, 1920.

Mackenzie, J.: Diseases of the Heart, London, ed. 6, 1919.

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*Norris, G. W., and Landis, H. R.: Physical Diagnosis, Phila., ed. 2, 1920.

*Osler, W., and McCrae, T.: Principles and Practice of Medicine, Appleton, N. Y., and London, ed. 9, 1920.

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Powell, R. C., and Hartley, P. H. S.: Diseases of the Lungs and Pleura, Phila., ed. 8, 1920.

Robertson, T. B.: Principles of Biochemistry, Phila., 1920.

*In the preparation of a list of books of this character, it is obviously impossible to make it complete. It is meant to be merely suggestive—a minimum. Many other worthwhile books might conceivably be added to a library of this type.

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Simon, C. E.: Manual of Clinical Diagnosis by Means of Laboratory Methods, Phila., ed. 9, 1918.
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*Archives Internal Medicine.
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WILL GIVE BED TREATMENT TO TUBERCULOUS

In the new individual room building of the Beth Israel Hospital of New York City, which has been planned and is in process of erection, bed treatment will be given to patients suffering with tuberculosis. Provision has also been made for the treatment of venereal disease patients in the building.

Protoplasm, the physical basis of all life, whether vegetable or animal, consists of carbon, oxygen, hydrogen, nitrogen, with traces of phosphorus and possibly sulphur. Science knows no living thing which does not consist of protoplasm.—Robert W. Mackenna.

NURSING AND THE HOSPITAL

Conducted by CAROLYN E. GRAY, R.N.,
Director, Department of Nursing Education, College for Women,
Western Reserve University, Cleveland, Ohio

THE TRAINING OF ATTENDANTS*

BY KATHERINE SHEPARD, R.N., SUPERINTENDENT OF THE HOUSEHOLD NURSING ASSOCIATION, BOSTON, MASS.

THE Household Nursing Association was organized in 1912 by the Woman's Municipal League of Boston. They followed a plan which Mr. Richard Bradley had worked out in Brattleboro, Vermont, whereby nursing care was provided in cases where the service of a graduate nurse was not required or could not be afforded. Women of more or less training were sent out by the registry under the supervision of a graduate nurse who visited each case once a week or oftener to give any necessary advice or instructions.

The registry always endeavored to send to a case the woman best suited to undertake the work, but it was often difficult to find out the extent of her training or experience. It was therefore decided to give a definite course of training and the school was opened in April, 1918. The course was carefully planned to give the pupils only what seemed absolutely necessary to fit them for the special work which they have to do, omitting all non-essentials.

During the three years 145 women have entered the school. Of these thirty-two were unable for various reasons to complete the course, fifty-two have been graduated and there are at present thirty-seven in the school. We have also had seventeen pupils from other hospitals. The Talitha Cumi Maternity Home, which gives a nine months maternity course, sends its pupils to us for the six weeks household training.

May Pay in Installments

The tuition fee is $50.00. If immediate payment is impossible, the pupil may pay it in installments during the earning period. The course of instruction covers seven months; a six weeks' preliminary course of household training at the headquarters of the Association, six months' hospital training, the last six weeks being in post-natal work. This is followed by six months, supervised field work.

During the household training the pupils are in charge of a resident instructor, who is a graduate of Simmons College. The cookery course includes two branches, that for the invalid and that for the family. This covers thirty lessons of two hour periods. The pupils are taught the planning of the family budget, and are taken to market and taught the buying of food. They have six lessons in nursing similar to the Red Cross Home Nursing Course, taught by a graduate nurse who also instructs them in the elements of ethics and etiquette. Their course in elementary physiology with special emphasis on the digestive tract together with a brief course in dietetics gives them a foundation for their hospital work. These lessons are made as simple as possible.

By having this course precede the hospital training, the pupils, most of whom have had a meager education, cover more ground in the limited period than would be possible if the study were combined with the unaccustomed hospital routine. Our aim is to prepare the pupils for the hospital that they enter with some knowledge of the essential requirements and to enable them to take active part in the work of the wards at once.

Class Divided into Groups

Perhaps an outline of a typical day will give an idea of how the household training is carried on. Let us take a class of twelve, which is divided into three groups of four each. The first group prepares and serves the breakfast for the class and the staff, and clears up afterwards, while the other two groups are doing the dormitory chamber work. At nine o'clock all assemble for a one hour recitation followed by a one hour lecture, the two divided by five minutes' settting up exercise with open window. The second group then prepares and serves dinner. At 2:30 all assemble for cookery instructions and laboratory. The third group prepares the supper. In the evening a two hour quiet period is maintained for study. It will of course be understood that the groups are constantly shifted so that each individual has practice in the various duties of the household.

The problem of making these women understand the necessity of discipline is naturally greater than in a training school for nurses, because we have grandmothers and girls of high school age in the same class. Their previous schooling and environment vary as widely as their ages.

The work would be much easier if we had a satisfactory textbook covering this particular course. Our pupils study from the notes which they take with varying facility, and are given a physiology for reference which is in some cases too advanced for their comprehension. We hope in the near future to prepare a simple textbook which could be made available for other schools.

On completion of the household training the pupils are sent to the affiliated hospitals. Reports of their progress are sent to the association, and the superintendent visits the hospitals to keep in touch with them. Our affiliated

*Paper read at annual meeting National League of Nursing Education, Kansas City, Missouri, April, 1921.

hospitals are the Henry Haywood Memorial Hospital at Gardner, Mass., the Deaconess Hospital, at Concord, Mass.; the Talitha Cumi Maternity Home, Boston, and the Rufus Frost Hospital in Chelsea, Mass.

After the seven months course of instruction is finished, the pupils are sent on private duty under the supervision of a graduate nurse. Their cases are selected to give them as much variety as possible. Each case is visited by the supervisor at least once each week, and more often when necessary. She inspects the work of the attendant, gives any necessary instruction and endeavors to adjust any difficulties. Sometimes it is necessary to protect the attendant from the unreasonable demands of the family, who may give parties and burden the attendant with all the preparation in addition to the care of her patient. Often the supervisor must teach the attendant how to handle the domestic situation in the individual home. It is here that the attendant would fail if she had received only institutional training. With the household training she only needs guidance in applying what she has learned to meet the needs of the home upset by illness.

The diploma, which is signed by the affiliated hospitals, is not given until the satisfactory completion of the entire thirteen months although earning begins as soon as the hospital training is finished. The wage for the first three months is $17.00 a week, an additional fee of $1.00 being paid to the association by the family for the expense of the supervisor. The next three months the attendant receives $19.00 per week.

Objected to Oversight

The policy of the association has always been to maintain weekly supervision over every case on the registry. After the training school was started we found that attendants were leaving the registry rather than submit to constant oversight. We questioned a great many of the attendants and found that they resented the idea of being supervised more than the actual visit of the supervisor on the case. They seemed to feel that they had gained nothing by graduation and receiving a diploma. Now we inform the attendants that supervision will stop upon graduation, but that the association will endeavor to visit each case on the registry at least once in order to see that everything is satisfactory both for the family and the attendant. The supervision fee which was collected by the attendant with her wages was also given up after graduation and a case fee of $2.00 substituted, which covers all expenses of carfare, telephone, postage of bills etc. This plan has apparently been successful. The friendly visits of the nurse are usually welcomed by the attendant. A large number of attendants remain on the registry and we keep in touch with all our cases as much as we did before.

Experience has shown us that it is unwise to train attendants in the same hospital with pupil nurses. There is inevitable jealousy and friction between the two classes of students, and the drudgery of the wards falls entirely upon the attendant, without the interesting nursing care to make this drudgery bearable. Our experience also shows us the advantage of organizing the training of attendants independent of the hospitals. If the attendant receives the household training under home conditions, and is sent from the school to the hospital for the necessary experience in bedside nursing, returning to the school for her graduation, she is more likely to feel a loyalty to the association and not claim to be a graduate of the hospital training school.

The future of the attendants and their proper employment is largely in the hands of physicians. It is not enough to give these women careful training for their special work in the nursing field if they are afterward allowed to undertake work beyond their ability and without supervision. Many doctors in Boston and vicinity, after securing an attendant from our registry, keep her constantly employed on their own cases without further reference to us. The attendant naturally prefers to work independently and very soon feels herself quite on the level with the graduate nurse. This is not the case with doctors of high standing in the profession. They always refer to us for the attendants and usually insist on having them under supervision. Doctors are now asking for our graduates in preference to the experienced nurses whom we also have.

Another difficulty in keeping the attendants on the registry is that they are in great demand for hospital work. They receive wages almost as large as those paid the graduate nurse, and enjoy the regular hours off duty more than the uncertainty of private work. It is an interesting fact that out of almost every class, one or two students decide to take the three years' training. When they apply to any school they are advised to take the three years' course if they have had the required education. Often they are not willing, or do not feel able to give up the three years, but after finishing the thirteen months, and saving enough money, they are often strongly desirous of becoming graduate nurses. If their education makes this impossible, we have sometimes been able to find light work for them where they can attend night school, and qualify themselves for hospital training. These women would probably never have entered the hospital training school without their experience as attendants.

Many Problems Present Themselves

Some of our most pressing problems are these:

The discontent of the attendants with the name. We have recently had a petition from a number of pupils asking to be called practical nurses. They are apparently willing to have the word "nurse" qualified, if it may only be somewhere in the title. Another problem is their desire to wear white uniforms. This we try to discourage.

The difficulty of installing the feeling of loyalty to the school. This is probably because the pupils are in the central school so short a time, and during this time there are no older pupils to establish a precedent. We have made efforts to link the alumnæ with the school but have had rather poor results.

Then there is the matter of what pay they should receive. After graduation all attendants on our registry are held to $22.00 a week, with $2.00 extra for laundry. All other registries in Boston pay much more. We arranged conferences with the various registries hoping to agree if the registrars of the nurses' clubs had not refused to come lest they be contaminated by the commercial registrars, and on this account nothing was accomplished.

There is above all the grave problem of preventing the attendants from undertaking work beyond their ability. In our opinion, however, the trained attendant is much less dangerous to the public than the practical nurse who has picked up some nursing skill and a great deal of misinformation. We try to impress upon the pupils from their first day in the school their definite, if limited, place in the nursing world. It is sometimes hard to teach them their limitations without discouraging them.

This might more easily be handled if the attendant had a recognized standing in the community. She knows she is only on suffrance with many graduate nurses and is apt to feel an antagonism for them which need not exist. Legislation may help to define the place of the attendant.

In the winter of 1921 the H. N. A. brought before the legislature a bill, for licensing attendants which had the support of many doctors and of the Massachusetts state nurses. This bill was favorably reported by the public health committee but was defeated in the ways and means committee owing to the opposition of the state hospitals for the insane. They argue that it would injure their hospitals where the attendants have very limited training; that if the attendants were trained and licensed they would increase the expense to the state of running the insane hospitals. This winter the state nurses decided to wait a year and watch the result of licensing in New York, before presenting another bill.

We hope that in the future there will be many more central schools such as ours, all giving a standardized training, sending the pupils to affiliating hospitals and taking them back to work under supervision.

Future Especially in District Nursing

We believe there is a future for attendants in district nursing, especially in country places where several might work under the supervision of one graduate nurse. The nurse's efficiency would be increased by this saving of her time and strength. This has worked successfully for many years in Brattleboro, Vermont, and there seems every reason for it to be equally successful in other country districts where the nursing problem is acute.

Recently a nurse from a village in New Hampshire visited the association. She was interested in two middle-aged women who were anxious to nurse their friends and neighbors under her direction. She wished to send them to the H. N. A. for training. In such a case we would be willing to release the pupils from the six months' private duty under our supervision if the nurse in their home village would report to us on their work and certify that in her opinion they had earned their diplomas. We are trying such an experiment at present in Sharon, Maine, where there was no graduate nurse within forty miles. The doctor who practices in three villages has promised to give a certain amount of oversight to the attendants who work on his cases and report to us at the end of six months.

There is one great difficulty in enlarging the field for the trained attendant. Most of us recognize the necessity of having well managed placing stations and supervision given by graduate nurses. But it is absolutely necessary that the supervising nurses should have enthusiasm for the work. If they are lukewarm or incapable the experiment is doomed to failure from the beginning. But enthusiasm is not enough in itself. The nurse must learn how to handle the attendants. Different methods must be used from those which would be successful with graduate nurses. No end of tact and patience is needed together with willingness and ability to study each personality.

We feel that during the last three years we have made some headway with the problem of training attendants. I have presented to you some of the difficulties which do not belong to us alone. These difficulties and the future of attendants depend upon the cooperation we are able to obtain from graduate nurses and from the members of the medical profession.

THE SICK NURSE

No item in hospital expenditure is so unremunerative and unjustifiable as that spent on sick nurses. Few people realize what the normal sickness rate in a large hospital means. The daily average of those off duty on this account varies very largely. In many hospitals no attempt is made to estimate it. In others careful statistics are kept of the number of nurses away on sick leave and in the sick-room, and except under most favorable conditions the percentage is rarely under five. Under modern conditions allowance has to be made for these five per cent. With a nursing staff of 300 it means that fifteen extra nurses have to be kept to fill the place of those who happen to be incapacitated, and since taking it all round every nurse certainly costs the hospital not less than £150 a year we have a total of £2,250 a year at the lowest estimate expended on this item alone. The cost of the sick nurse does not end here. Sickrooms must be provided, with extra attendance and treatment. In many cases the general health deteriorates in such a way that the services of a valuable nurse or half-trained probationer are lost to the hospital, and the wastage of vitality to the individual thus checked in her career cannot in any degree be estimated. Reckoning the space occupied by the nurses' sick quarters and the expense often incurred by having to engage private nurses to fill the vacancies, it is not extravagant to estimate the cost of sickness among the nursing staff in large establishments at a figure between £5,000 and £10,000 a year.—*The Hospital.*

PAST TRADITIONS AND FUTURE PROBLEMS

By JESSIE M. MURDOCK, Superintendent of Nurses, Postgraduate Hospital, New York City.

The training school that does not change and grow is practically dead, although there are those who insist upon a conservatism which only too often amounts to stagnation. Fond memories of the past make them believe that the old training school of their undergraduate days was perfect; and to the perfect, any change perforce must be for the worse. They forget that the primary function of the training school is to furnish the community with community servants—not the community of the past, or even of the present—but of the future. As conditions change, so must schools change. Any training school that goes on indefinitely training nurses for a past period of nursing, will sooner or later be discarded by the society whose needs it so signally fails to meet. It is our duty as well as our privilege to carefully guard and preserve the noble ideals and traditions of the old school, but at the same time we must make it come forward and serve the vigorous, modern life of today. The school must change to meet changing conditions.

There is concern in the minds of many at present, lest we over-educate the young women in the training schools. Those who fear that have in mind either the wrong kind of higher education or the wrong kind of young women. The following incident is not unfamiliar:

A college officer was asked if she would not have a physician speak to the college students on nursing. She refused, saying she was not interested in having college graduates take up nursing; it was a life of too many disagreeable details. She failed to see that a great nurse, like a great anybody else, is inspired, and that to an inspired being, a disagreeable detail, if a detail of duty, is glorified and becomes a great joy. There are plenty of inspired women in training, and the army of inspired ones will not be fewer, rather more. Even though the future training may be received in part on the benches of a university, it will make them none the less humane, nor will there be any of the ennobling influence of their labor lacking, when called to be a helpmate and an associate in the tremendously big things in life—birth, sickness, and death.

Good health and good sense are two of life's greatest blessings.—Publius Syrius.

Dietetics and Institutional Food Service

Conducted by Lulu G. Graves,
Supervising Dietitian, Mt. Sinai Hospital, New York.

THE DIETARY DEPARTMENT AT THE METHODIST HOSPITAL, OMAHA

At the Nebraska Methodist Hospital in Omaha, an institution with a capacity of 212 beds and with a large proportion of private rooms, Miss Bertha Ehlers, dietitian, has worked out the following plan:

The dietitian has complete responsibility of the dietary department, which includes the buying of all the food and kitchen equipment; planning of meals for patients, faculty, nurses and help; teaching of dietetics to nurses; responsibility of all trays in the hospital; special diet work; infant feeding work; and employment of help in the dietary department.

Her assistant is a practical woman who has had a great deal of experience in institutional work. She is responsible for the main kitchen, dining rooms, supplies in kitchen and general management of routine work. The housekeeper is responsible for the housekeeping and general work in the diet kitchens and on the floors; the maids there work under her supervision.

The main kitchen and dining rooms are located on the top floor. This has its advantages and disadvantages. In its favor it can be said that no cooking odors ever go through the house; the kitchens and dining rooms are light and cool; they are completely shut off from the rest of the house. The disadvantages, of course include the disposal of garbage and the bringing of supplies to the kitchen, for the store rooms are in the basement. One elevator is used for that purpose only. This arrangement is by no means ideal, but will have to remain as it is until the nurses' home is completed; then the present dining rooms will be used for store rooms and laboratories.

The food for nurses and patients is prepared in the main kitchen. The patients' food is sent to the floors in two large food carts; the lower closed compartments are for the hot food and the upper open compartments are for the cold. The hot food is transferred to steam tables in the diet kitchens. The diet nurse serves the trays which number about forty on each floor. She is assisted by a maid. A probationer is sent in during serving time to assist, and in this way become familiar with the diet kitchen work. The trays when served are placed on a tray cart which stands just outside the diet kitchen door during meal time. At two taps of the bell all available nurses on the floor are summoned to carry trays. The corridors are not long and therefore do not necessitate a great deal of walking. The trays can be carried very quickly if the nurses respond at once. The maid in the kitchen gets the trays from the patient's rooms after each meal, using the tray cart. She clears the trays, assists in dish washing, and then sets up the trays while the other maid is finishing up the general care of the diet kitchen.

Dietitian Responsible for All Trays

Each day the dietitian goes over the chart with the diet nurse to see that she understands all the diets. She goes through the kitchens during the time of serving, inspecting trays and giving personal supervision as much as possible.

There are four diet and service kitchens, one on each floor, and a fifth on the top floor, adjacent to the main kitchen. This is the special diet kitchen. Here we find one senior nurse, one junior nurse and a maid. The dietitian gives strict supervision in this kitchen for it is here that each nurse gets her training in special diet work, infant feeding, the marking of nourishments, salads and attractive dishes. There is no food laboratory as yet, so the diet kitchen must be used for some of this work.

The dietitian is responsible for each tray served, relieving the head nurse of that duty. She keeps a diet chart in each kitchen. This list includes the number of the room, the name of the patient, the doctor, whether the patient has a special nurse or not and the kind of diet—general, light, soft, liquid, special or selected. The latter gives the patient on general diet the opportunity to choose the food desired from a balanced list. On this diet chart there is a column for remarks. This may be used for comments, such as: Patient has poor teeth, patient does

WHY SO MUCH CRITICISM OF FOOD?

Why is the food service in hospitals almost universally criticized? Is this criticism just? If so, how can the situation be greatly improved? If not, how can the injustice of it be made generally known?

Note:—This is a subject of such great interest to every one connected with hospital life and service that readers are urged, each of them, to send a reply or suggestion.

not drink tea, patient very fond of fruit, patient has idiosyncracy for eggs, et cetra.

Daily at eleven a. m. and four p. m. the dietitian has a conference with each head nurse, who gives her a report of the condition of the patient. Special orders are taken from the doctor's order books each morning. By eleven o'clock most of the doctors have seen their patients. The four o'clock conference gives new patients who have come in since noon, patients dismissed, and includes new orders. This plan gives a close check on patients each day.

The dietitian makes "rounds" with the doctors once or twice a week. She tries to see each patient twice a week at least. On these occasions she explains the diet to the patient, hears complaints if there are any, learns his likes and dislikes. The dietitian must come in closer contact with the patient if she is to do good work.

During training each nurse receives forty hours class work in dietetics, one month of special work, four months in diet kitchens on the floors; this means one month in each diet kitchen. This gives her a variety of work because of the different units on each floor.

This plan can only be carried out where there is close cooperation among departments, doctors, nurses and dietitian.

THAT STEAM TABLE QUERY

"Why a steam table in the main kitchen of the hospital?" Reactions received from this query in the November issue were full of surprises.

Communications received from men who either manufacture or sell kitchen equipment were unanimous in the opinion that the steam table in the main kitchen is an expensive and unnecessary piece of equipment, but one very generally demanded.

Hospital and training school superintendents have been about equally divided in their arguments for or against its use. It is pretty generally conceded that steam tables are desirable in kitchens from which either nurses' or employees' dining rooms are served direct, but for floor service they are not desirable.

One instance was cited in a letter of a large steam table with eight insets for vegetables and other foods and two meat compartments which had stood in the path of travel in the kitchen for three years and had never been used for anything except a receptacle for the kitchen employees' shoes. Rather an elaborate shoe box for a hospital to provide for its employees, was it not?

Another surprising feature concerning the communications was that not one letter was received from a dietitian on the problem.

NEWS ITEMS

Miss Mercy Walker has finished the course of student dietitian training with Miss Gladwin at Jefferson Hospital, Philadelphia, and has been appointed dietitian at Binghamton City Hospital, Binghamton, N. Y.

Miss Minnie Phillips has accepted a position at Danville, Ill., as dietitian in the hospital there.

The November meeting of the Chicago Dietetic Association was held at the Hospital Library and Service Bureau on Friday, the eighteenth. The program arranged for the association by the Institute of American Meat Packers, represented by Mr. Manning, was greatly appreciated by those who attended. Mr. P. M. Whitson of the advertising department of Swift & Company spoke on the buying, cutting and using of meats from the wholesale point of view; Mr. E. Levy of the Olympia Market on Clark Street gave the retail side of the question.

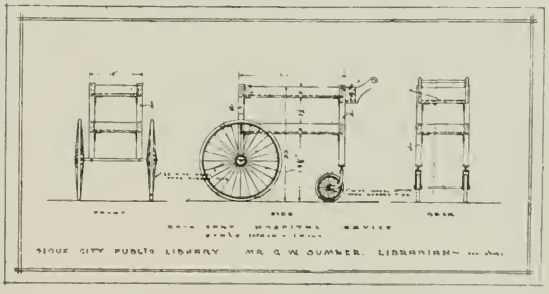
The December meeting is to be held at the same address on the sixteenth. Dr. J. Miller, president of the staff of Cook County Hospital, will be the speaker of the evening.

Miss Elsie Ball has been transferred from the U. S. P. H. S. Hospital at Arrowhead Springs, Cal., to the new 150 bed U. S. P. H. S. Hospital at Portland, Ore., as chief dietitian.

The November meeting of the New York Association of Dietitians was held the ninth of the month at the Y. W. C. A. The program for the evening was a review of the national convention in Chicago. Mrs. Shafer of the National Bank of Commerce spoke on administrative problems; Miss Wallace of the Fifth Avenue Hospital on equipment problems; Miss Wells of Brooklyn Hospital on dietotherapy; Miss Reid of the Association for Improvement of the Condition of the Poor on social service dietitians; Miss Addison of the Post-Graduate Hospital on the round table on education; Miss Holloway of the Pratt Institute on the addresses at the educational meeting; Miss George reviewed the meeting on the last evening of the convention. Miss Fisher of Teachers College closed the program with a short resume of the entire program. Every member of the New York Association who attended the convention, returned full of enthusiasm. Those members who were obliged to stay home were full of regret that they had to do so.

ISSUES BOOK LIST FOR PATIENTS

The Sioux City Public Library, which inaugurated recently a thoroughgoing book service in hospitals, has just published a pamphlet entitled "Two Hundred Books for Every-Day Use in the Hospital." The list of books, which is designed to meet the needs of every type of patient, was compiled by Miss Rose A. O'Connor, hospital librarian of Sioux City.



In presenting her list to the library profession and the public, Miss O'Connor declares that she has found that the book which may be to the taste of one in good health is very often the one which is least desired by the invalid, for when the body is ill the mind is not in a state to digest the heavier food it required under normal conditions. All the books are those which have been found through practical experience to fill the needs of the patients.

Short magazine stories from standard publications, placed in manila holders, have been found very practical in hospital library service, Miss O'Connor declares, because they are no burden for the patient to hold and are rapidly read.

A book cart has been especially designed for use in the Sioux City hospitals by Mr. C. W. Sumner, librarian. It has proved most satisfactory in transporting books from ward to ward. A design of the cart is shown in the accompanying illustration.

HOSPITAL EQUIPMENT AND OPERATION

With Special Reference to Laundry, Kitchen and Housekeeping Problems

Conducted by FRANK E. CHAPMAN, Director
Mt. Sinai Hospital, Cleveland, Ohio

NATURIZED FLOORING

In view of the comprehensive study of hospital floor material being made, considerable interest attaches to a so-called naturized flooring, which has recently been put on the market.

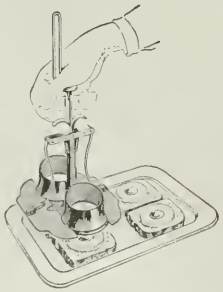
This flooring is a product which is made of rubber reinforced with cotton fibre under vulcanizing heat and great hydraulic pressure. The process results in a material that is extremely strong and wth unusual wear resisting quality.

Another feature of the naturized flooring which lends it for hospital use is the fact that it is easily cleaned with a wet mop or cloth. The material does not stain or generate dust, deadens the ordinary foot falls, and is extremely comfortable to the feet. The flooring is furnished in a wide range of colors and in unit sections so that any space may be easily fitted, and if repairs are necessary in the floor sections can be easily removed without spoiling the appearance.

Not only is the cost of upkeep of this flooring low, but the initial cost is reasonable, varying from 85 cents to $2.00 per square foot.

PRACTICAL EGG POACHER

Poaching eggs has always been difficult in either the home or the hospital. Even when great care is used there is a tendency for the egg to break, and it is likewise difficult to drain off the water in which it has been poached without breaking the yolk.



Eggs retain their shape when poached in this device.

A device for poaching eggs, recently placed on the market, seems to have solved this problem. With this poacher the eggs are formed into a dainty shape and may be easily lifted from the water. This greatly adds to the appetizing appearance of the food service.

The operation is extremely simple—all that it is necessary to do is to break the egg into the cup and place the poacher in simmering water. When the eggs are done, the poacher is lifted and the water drained off by lifting the small lever. The eggs can then be deposited on the toast, or wherever desired, by simply pressing this lever.

The poacher is made of heavy nickel steel and is easily cleaned. If desired, the poacher can be connected to a timing device similar to those commonly used for boiling eggs.

NEW REPOURING COFFEE URN

The automatic repouring of coffee is a comparatively recent development in the manufacture of coffee beverage

and does away with the bulky hot water urn. The repouring in the urn illustrated is accomplished by means of an electrically operated centrifugal pump, which not only

THE high esteem in which Colgate's Ribbon Dental Cream is held by representative physicians, surgeons and members of the nursing profession needs no explaining to those who understand the full force of traditional obligations.

It is believed that Colgate's Ribbon Dental Cream is in every respect worthy of the name it bears, and that there is ample foundation for its enduring popularity with the better minds in dentistry and medicine.

A generous supply of samples will be sent upon receipt of request on your professional letterhead.

Welfare Dept.,
COLGATE & CO.
Established 1806
New York, N. Y.

repours automatically but also forces the water through the coffee for the first time, doing away with all danger from high pressure steam.

In the new urn the hot water jacket is made of 32-ounce copper, tin lined, and holds sufficient water for both coffee and tea. The coffee jar proper is a drawn steel bowl lined with glass which will not crack or check from sudden heat or chill. This coffee jar is set in a tinned copper jacket which maintains an insulated air space around it. By means of this feature it is claimed the urn will maintain coffee at a serving temperature for two and a half hours after making. The repouring pump is made of silver plated brass and monel metal.

The urn is made in three sizes, according to the capacity of the liners, which are six, eight and ten gallon size.

SECTIONAL CUPBOARDS FOR WARD KITCHENS

One of the troublesome problems in the equipment of a hospital lies in providing proper shelving and storage space in the ward kitchen or serving room. Very frequently makeshifts are utilized which fail to offer necessary conveniences. White enameled steel shelving is of course desirable, but too frequently is impracticable on account of the expense in obtaining specially made fixtures of this type.

To meet the varying conditions for such equipment, there has recently been devised a system of cupboard units of standard type, any number or combination of which can be obtained. Through the standardization of these cupboards, manufacture is permitted in larger quantities and a lower sales price is thus secured.

Two general types of cupboard units are listed, both of which are eighty-four inches high and twenty inches deep. One of the units shown in the left of Fig. 1 offers cupboard space at the top with doors, an open storage space and, below, room for the customary type of ward refrigerator. The other type shown at the right also provides the three-shelf cupboard at the top. The insulated opening in the center of this cabinet is left for the installation of a gas plate; another three-shelf cupboard section is in the base.

In Fig. 1 the two units are shown separately on either side of a sink, while in Fig. 2 they are placed side by side, making virtually a continuous cupboard.

In the second figure a modification of one of the units has been made to provide for a compact gas range in-

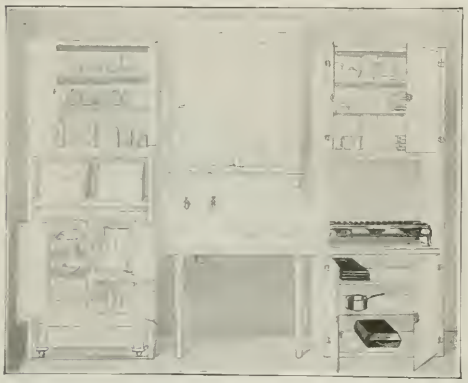


Figure 1.

Figure 2.

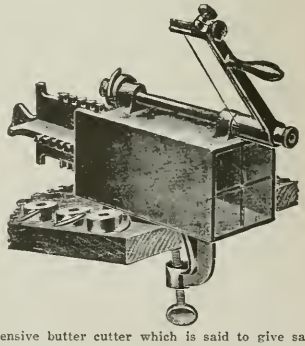
stead of the hot plate. In this type, two roomy drawers are supplied in the base.

The construction of these cupboard units is entirely of steel with welded joints; they are finished in white enamel, although other finishes can be secured if desired. A sliding shelf is provided in one style of unit, giving a convenient work surface.

The design of this cupboard permits the hospital executive to equip the serving rooms or ward kitchens completely with ample cupboard space, so arranged as to be particularly convenient for the nurse in charge.

IMPROVED BUTTER CUTTER

The handling of butter has always been a problem in the hospital, and while many different styles of butter cutters have been placed on the market, few of these have really solved the problem.



An inexpensive butter cutter which is said to give satisfaction.

A new butter cutter recently marketed claims to overcome many of these objections. It is a well constructed compact and simple machine, cuts four square patties with one turn of the handle, yet costs only about $15.00.

The device holds one pound of print or bulk butter and can be regulated to give 40, 48, 56, or 72 patties.

The machine is made of polished aluminum alloy, which is entirely rust proof and is so constructed that it can be readily taken apart for cleaning.

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A Bloodless Field

is promptly produced by the application or hypodermatic injection of

Suprarenalin Solution, 1:1000

—the stable and non-irritating preparation of the Suprarenal active principle. The e. e. n. and t. men find it the premier product of the kind.

Ischemia follows promptly the use of 1:10000 *Suprarenalin Solution* slightly warmed (make 1:10000 solution by adding 1 part of Suprarenalin Solution to 9 parts of sterile normal salt solution).

In obstetrical and surgical work *Pituitary Liquid* (Armour), physiologically standardized, gives good results—½ c. c. ampoules obstetrical—1 c. c. ampoules surgical. Either may be used in emergency.

Elixir of Enzymes is a potent and palatable preparation of the ferments active in acid environment—an aid to digestion, corrective of minor alimentary disorders and a fine vehicle for iodides, bromides, salicylates, etc.

As headquarters for the organotherapeutic agents, we offer a full line of Endocrine Products in powder and tablets (no combinations or shotgun cure-alls).

Armour's *Sterile Catgut Ligatures* are made from raw material selected in our abattoirs, plain and chromic, regular and emergency lengths, iodized, regular lengths, sizes 000—4.

LABORATORY PRODUCTS

Literature on Request

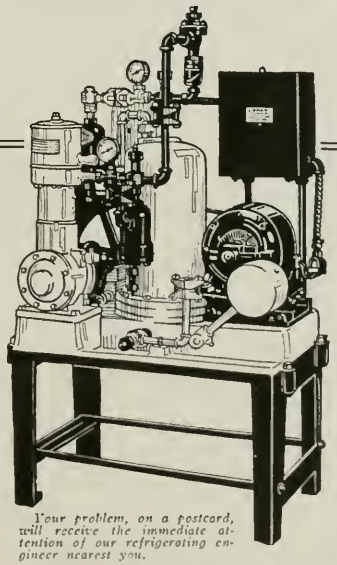
ARMOUR AND COMPANY
CHICAGO

YB
Page 277

ICE—One Hour Your Friend, the Next Hour Your Enemy

FOR the short time when the ice chamber of your refrigerator is completely filled, then ice is your friend. **But ice melts.** Rapidly it saturates the air with moisture — slows up circulation — becomes your enemy with its changing, feeble cold that cannot block food spoilage.

With a LIPMAN Full-Automatic Refrigerating Machine on the job, all this changes. There is no ice —just a continuous, unvarying flood of dry, crisp-cold air which preserves perishables indefinitely. Operates at fraction of the cost of ice; requires no attention other than occasional oiling.



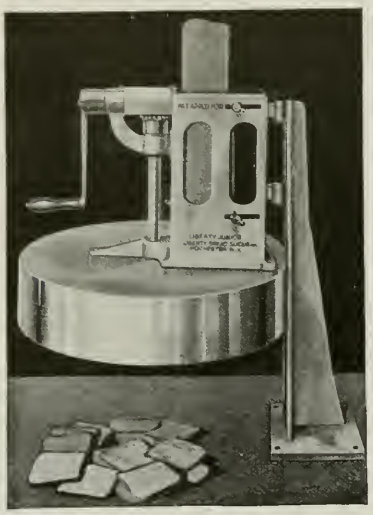
Your problem, on a postcard, will receive the immediate attention of our refrigerating engineer nearest you.

Lipman
FULL-AUTOMATIC REFRIGERATING MACHINES

Lipman Refrigerator Car & Mfg. Co.
Dept. C1. Beloit, Wis.

NEW TYPE OF BREAD SLICER

Superintendents of the average sized hospital will be interested in a new type of vertical bread slicer designed to meet the needs of institutions where space is limited and where the demands do not warrant the use of more ex-



pensive horizontal slicers. Moderately priced and of a moderate capacity, this new slicer should prove advantageous in kitchens where no bread slicer is in use, or where the slow method of cutting bread on meat slicing machines, vegetable cutters or unprotected bread slicers is employed. The machine is adaptable to almost any space, owing both to its small size and to the fact that it is available in three different types, one for end table, one for wall fastening and one for operating over the counter. The smaller model of the machine is suitable for bread up to five and half inches square, and will operate at the speed of two hundred slices of any desired thickness from one-eighth to two inches per minute.

The slicer is simply constructed and is made of polished aluminum.

SOMETHING YOUR PATIENTS WILL APPRECIATE

The jaded nerves of the average patient are easily irritated by many little annoyances which can frequently be eliminated. Rattling windows or doors are particularly annoying, while shaky beds, tables and dressers are not only disturbing but oftentimes result in the spilling of food, water or medicine.

An enterprising firm has recently introduced a device which should be used in every hospital. It is a wedge shaped block, which can be instantly placed under an uneven table or bed and which will successfully wedge a rattling window or door.

This block is constructed of a soft wood which does not scratch the floor. In the center is a rough hole, the patented feature, which causes the block to grip the floor and prevents sliding. This wedge can be used in leveling any kind of stand, table, shelf or equipment, and is inexpensive.

THE FRESH EGG PROBLEM AT BRIDGEPORT HOSPITAL

By JOHN F. BRESNEHAN, M.D., Superintendent, Bridgeport, Conn.

ALL of us have found trouble at times in obtaining fresh eggs. It is true that we can order fresh eggs, strictly fresh, extra fancy, but we do not always get them.

To the very sick patient whose diet is mainly eggnogg, and to the fastidious private patient whose breakfast may consist mainly of poached egg on toast, a slightly stale egg is, to say the least, a disappointment. Absolutely fresh eggs, like a cup of good percolated coffee, do more than any one thing to establish a reputation for the institution for excellent food. And, after all, it is surprising how many people select their hospital on the basis of hearsay evidence regarding food.

Following a particularly aggravating period of paying *uncommon* prices for *common* eggs, this hospital decided that the only way to obtain eggs suitable for the hospital was to have eggs laid by hospital hens. Accordingly a small plot of land was set aside and fenced in, a small hen house being placed at the proper point for a southern exposure. A small flock of Rhode Island Reds and White Wyandottes were obtained from a reputable dealer. These hens have been bred for their laying qualities and not with the idea of furnishing a meat. The experiment was a success during the past year, and this spring the fenced area and hen house were enlarged. From time to time, incubated chicks were purchased in lots of 100. No chicks were purchased unless they were two weeks old, with the guarantee that they were bred from selected strains. These hens will begin laying by next February.

The upkeep of this small poultry adjunct has been very moderate. Stale bread and meat scraps, edible garbage, together with a small amount of purchased grain, has furnished the food supply. The hospital grounds keeper, instructed by a friendly poultryman, quickly mastered the necessary principles of poultry-raising. To be sure, it has been necessary to oversee the absolute cleanliness of the henhouse and the frequent and accustomed use of vermin powders for the young fowl. It has also been necessary to see that the poultry houses were kept locked and that the eggs when gathered should be sent directly to the proper diet kitchen. The results have been so satisfactory, however, as to lead one to believe that hospitals which are so situated as to have no land available for poultry purposes would do well to make arrangements with some neighboring farmer to sublet a portion of his ground and to care for such poultry stock as the hospital might provide. This statement is made, because in the experience of the writer there seems to be no sure way of securing absolutely fresh eggs each day than by having them produced for the hospital through its own poultry adjunct.

INSTITUTIONAL MEMBERSHIP IN A. H. A.

"Corporations, associations or other organizations existing for the promotion of public health, but not having direct responsibility for the care of patients" are eligible to association institutional membership in the American Hospital Association following constitutional changes made at the West Baden conference. Such action was taken to meet a growing demand from various organizations for an official connection, giving them the Association bulletin and other literature in some way other than through a personal membership of one in their organization.

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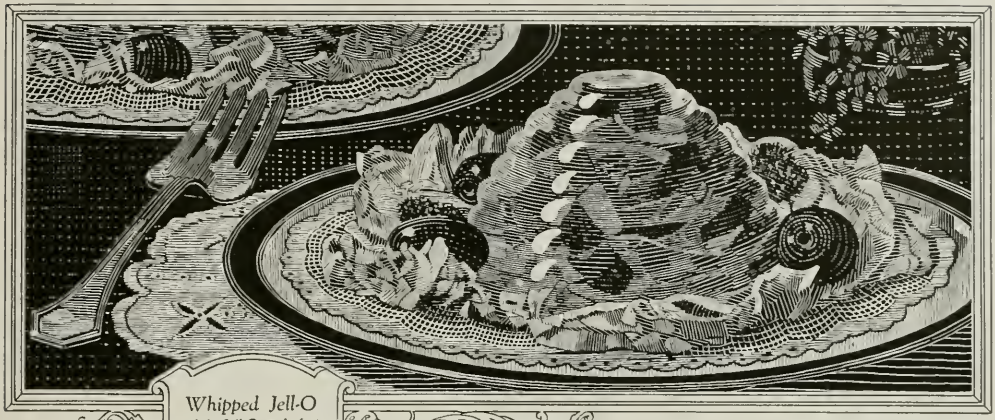

Whipped Jell-O

While Jell-O with fruit as illustrated is very popular, an increasing number of users are taking advantage of the fact that it can be whipped as readily as cream. Send for a free booklet.

WHEN we originated our twenty-six ounce package of Jell-O we had in mind the same convenience that we have specialized in for the past quarter of a century. There is no weighing or fussing to contend with. Simply add the contents of the package to a gallon of boiling water. It stands for economy in time where time is costly.

JELL-O

America's Most Famous Dessert

The American Offices and Factory of The Genesee Pure Food Company are at Le Roy, New York, in the famous Genesee Valley Country.

Gallon Package

The Offices and Factory of The Genesee Pure Food Company of Canada, Ltd., are at Bridgeburg, Ontario, on the Niagara River.

Meetings, Conventions and Conferences

EVERY SASKATCHEWAN HOSPITAL REPRESENTED AT THIRD ANNUAL CONVENTION

THE Saskatchewan Hospital Association's third annual convention opened in the city hall at Regina, November 3, with an attendance of over 100 delegates. All of the thirty-nine hospitals in the province were represented. Many of the delegates from British Columbia, Alberta and Manitoba, who were in Regina for the convention of the Western Canada Hospital Association, which concluded on the previous day, remained over for the sessions of the Saskatchewan Association.

During the convention many timely topics were discussed and papers were read by eminent representatives in the different fields of hospital work. Mr. J. O. Hettle of Saskatoon, president of the association, occupied the chair during the first morning session.

Provocative of much discussion was the paper on "Nursing Problems" read by Miss E. M. Turner of the City Hospital, Saskatoon.

"We all have a very clear idea of the nurse's duty to the hospital," said Miss Turner, "but the duties of the hospital to the nurse have not been so clearly defined and in some cases not even considered. It is essential, for instance, that a nurse be given a home life. Provision must be made for her amusement and recreation. The student nurse should have an individual room so that she may have an opportunity to be alone when she so desires. A study room should also be provided for nurses in training.

"Training schools should have a standard of education. It should be compulsory that each pupil be supplied with the necessary text-books required by the standard curriculum. Every hospital of fifty beds or over should have an instructress of nurses. Small schools should affiliate with other schools to provide sufficient training in special branches of work.

Graduate Courses in Nursing

"Nurses wishing to take postgraduate work have been going to the United States to take it, because of insufficient training in the Canadian schools. Our larger training schools, of 300 beds or over, should offer postgraduate courses both in theory and practice.

"One of the weakest points in the whole machinery of many hospitals has been and still is its dietetic department. The introduction of a practical, sensible course in dietetics will mean a decided improvement in many institutions."

Discussion of the paper was led by Miss E. B. Renton of Moose Jaw General Hospital, who further emphasized the importance of keeping the nurses contented. Dr. O. E. Rothwell of Regina discussed the arrangement of postgraduate courses.

Dr. M. T. MacEachern of the Vancouver General Hospital in British Columbia addressed the convention on "Hospital Administration."

Urges Practice of Reclamation

"For the economical management of hospitals, reclamation should be consistently practiced," said he. "If you can't mend a thing, cut it down or make it over for some other purpose. Much money can be saved on the reclamation of linen alone.

"It is also good economy to give your patients good food and lots of it. Good, intelligent publicity is another factor that cannot be overlooked. The public, generally speaking, has some rather ignorant and erroneous ideas about hospitals. Good publicity will help to dispenl such ideas.

"In the nursing department, the nurse should be trained to obey the doctor's orders implicitly. The doctor may order, but if the nurse fails to carry out his commands nothing is accomplished. The nurse should be trained to make accurate observations and record them on the chart. Her eye is continual; the doctor's only casual."

Union Hospital Organization

At noon the delegates were the guests of the board of governors of the Regina General Hospital at a luncheon in the hospital, where they were given an enthusiastic welcome and afterwards taken on a tour of inspection of the two city hospitals.

The afternoon session was presided over by Mr. Joseph Needham of Unity. Mr. T. T. Murray of Saskatoon gave a delightful talk on his visit to the convention of the American Hospital Association at West Baden.

"Organization of a Union Hospital District" was the subject of a paper delivered by Mr. A. C. Sarvis of Moosomin. Mr. Sarvis related the details of how union hospitals are established under the existing laws of the province, relating some of the difficulties which have yet to be overcome. Dr. M. M. Seymour, commissioner of public health for the province, suggested that a committee be appointed to draw up a resolution dealing with the defects of the present act for presentation to the provincial government. He said he could assure the convention of the serious attention of the legislature to this matter. Mr. Needham, J. W. Heartwell and Dr. Seymour were appointed to draft such a resolution.

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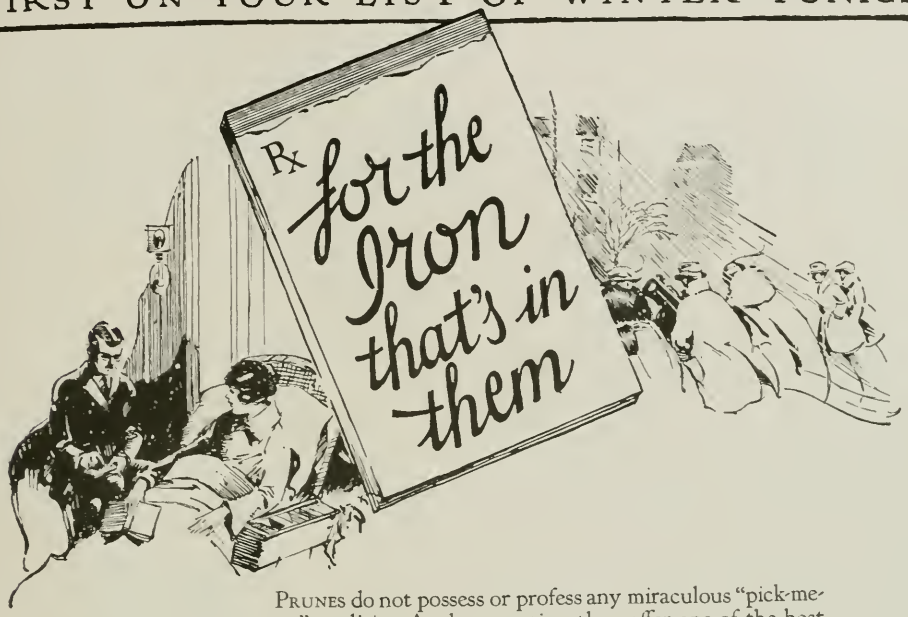
FIRST ON YOUR LIST OF WINTER TONICS



PRUNES do not possess or profess any miraculous "pick-me-up" qualities. At the same time they offer one of the best body-building "tonics" you can prescribe for any case—convalescent or chronic.

You have always known, in a general way, that prunes belong to the "iron group." But have you ever realized just *how much* iron and mineral matter this fruit-food furnishes?

Nor is this all! Sunsweet Prunes not only are rich in assimilable iron—but their natural fruit sugars offer the invalid a quick source of energy. There is no tax on the digestive process. No elaborate process of conversion is necessary to get the benefit of the sugar. This is a big advantage to any patient—especially to those [diabetics, for example] who must largely exclude sugar from their dietary.

On top of all this is the traditional laxative quality of prunes—a quality made doubly effective in Sunsweet Prunes. And, on top of that, are the experiments of Osborne and Mendel which prove prunes to be a source of water-soluble vitamine. Frankly, doctor, can you find a better, ready-to-put-up tonic than this in Nature's Materia Medica?

To any physician, dietitian, or nurse interested in the palate-and-health appeal of prunes and apricots we will gladly send our health-brochure "For the good that's in them." Also our new Recipe Packet—"Sunsweet Surprises for 1922." Both are free! California Prune & Apricot Growers Inc., 194 Market Street, San Jose, California. An association of 11,000 growers.

SUNSWEET
CALIFORNIA'S NATURE-FLAVORED
Prunes

Mr. J. W. Heartwell of Rosetown then read a paper on the "Operation of Union Hospitals," dealing with the manner in which these hospitals are being conducted after being established under the union hospitals act of Saskatchewan.

Discuss Financial Problems

The morning session of the second day was presided over by Alderman J. K. McInnis, president of the board of governors of the Regina General Hospital. The first speaker was Mr. O. J. Godfrey, chartered accountant, of Indian Head, who went briefly into the question of hospital accounting. Mr. Godfrey pointed out that the forms of report which the smaller hospitals have to send to the government are absolutely valueless. They present a cash statement only and cash statements are not only useless but are also misleading, he declared.

Mr. A. Wilson of Prince Albert addressed the afternoon session on "Municipal Hospital Finance." Hospital finances should be in just as good shape as those of any other kind of business institution, he declared. If the balance sheet shows a deficit at the end of the accounting period, there is something wrong in the management of the hospital. He recommended a plan whereby the city council should pay the hospital for treatment of indigent cases at regular intervals, instead of requiring the hospitals to present the council with an entirely uncertain estimate at the beginning of the year.

The secretary read a paper on the same subject by Mr. Howard Jones, secretary-treasurer of Lloydminster and District Municipal Hospital, who was unable to remain to address the convention. Mr. Jones' paper dealt principally with the difficulties experienced in his district on account of the fact that the hospital at Lloydminster is jointly owned by municipalities in the two provinces of Saskatchewan and Alberta. Under present legislation, both in Saskatchewan and Alberta, Mr. Jones pointed out, every patient must be treated as an indigent, since indigency or inability to pay in most cases has to be proved, and is not frequently known upon admittance. To be certain of fixing the responsibility, it is necessary to notify the municipality of every case. This procedure is very costly, especially in a hospital such as theirs, where they handle 600 or 700 patients in a year, he stated.

"The Construction of a Modern Hospital" was the subject of a paper by Mr. R. M. Thompson of Saskatoon. He outlined the way in which he considered the different departments of a hospital should be planned. He emphasized the necessity for fireproof construction which, he declared, could be obtained in many cases at a cost equal to, if not less than, that of erecting a non-fireproof building. Insurance would be lessened so materially as to make up for any increase in the initial cost.

Moose Jaw Gets Next Meeting

Moose Jaw was decided upon as the meeting place for the next annual convention, and the following officers were elected: Honorary president, Premier W. M. Martin; President, Joseph Needham, Unity; first vice-president, G. E. Patterson, Regina; second vice-president, W. F. McBean, Moose Jaw; third vice-president, Miss E. B. Renton, Moose Jaw; secretary-treasurer, T. T. Murray, Saskatoon.

Votes of thanks were extended to the retiring president, Mr. J. O. Hettle, and the retiring secretary, Mr. G. E. Patterson.

The session ended with a reception of the delegates by the sisters at the Grey Nun's Hospital.

ALBERTA HOSPITAL ASSOCIATION HOLDS THIRD ANNUAL CONVENTION

THE third annual convention of the Alberta Hospital Association was held November 9, 10 and 11 in the new medical building of the University of Alberta, in conjunction with the Alberta Association of Registered Nurses.

The convention opened with a public meeting under the chairmanship of Lieut. Gov. R. G. Brett, M.D. Mr. R. G. Reid, minister of public health, addressed the meeting, explaining the general attitude of his department towards the public health services and the policy of the new Farmers' government toward health and hospital problems. Miss Jean Browne, R.N., superintendent of school hygiene for the Province of Saskatchewan, gave an excellent address on her experiences and impressions gained while taking postgraduate studies in European hospitals under the auspices of the International Red Cross Society. This meeting was also addressed by Dr. H. M. Tory, president of the University of Alberta, and Rev. Mr. Carlton. The latter traced the development of hospitals from the Middle Ages, when the church took the first step in providing places where sick travelers could be cared for in a medical as well as a spiritual way.

Thinks Nurses Are Overtrained

At the business session two outstanding papers were read. One by Dr. H. C. Wrinch, president of the British Columbia Hospital Association, entitled "The Nurse of the Future," created a good deal of discussion and antagonism among the nursing elements. This paper deserves special mention. Dr. Wrinch showed how, as a result of financial distress, hospitals had developed the tendency to exploit the services of the undergraduate nurse by gradually lengthening the course of study, thereby retaining her services for a maximum period at a minimum financial outlay. He further discussed the great shortage of nurses for service in the rural communities, and expressed doubt as to whether the complete training given to undergraduate nurses in general hospitals was a necessity in carrying on such work. He asked that hospital authorities consider the matter carefully and develop training schools similar to the university practice, wherein the minimum training of two years is given to all nurses, and to those showing special aptitude or desire for administration duties, such as government service and superintendents, further training leading to a more advanced degree is permitted.

In this way, he believes, more young women would be induced to enter nursing service and, because of the lessened cost of their obligatory education, would be willing to practice their profession for a lesser financial return. By this means more nurses would be available for service in rural communities. Official nursing organizations, he declared, have accepted as one of their principal functions the professionalizing of the high and God-given calling

Adv. page 48

IF THERE WERE BETTER

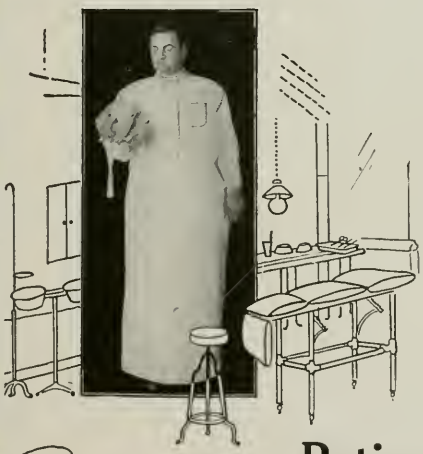
SURGEONS' GOWNS

PATIENTS' BED GOWNS and NURSES' UNIFORMS

They would bear the label of The Hospital Nurses' Uniform Mfg. Co.

SPECIAL OFFER:

We agree to ship Surgeons' Gowns, Patients' Bed Gowns and Nurses' Uniforms PREPAID, subject to return, COLLECT, if they are not entirely satisfactory as to materials, fit, workmanship or price.



Surgeons' Gowns

No. 846. Made of heavy Indian Head cloth, 60 inches long, long sleeves, fashioned into perfect-fitting garments from material that resists blood stains and chemical action. Per dozen.....$18.00

No. 847. Of Pepperell Jeans or Duretta cloth. Very durable. Style same as No. 846. Per dozen.....$18.00

No. 845... Nurses' Operating Gown of white Duretta cloth. Full-cut and substantial. A garment of exceptional wearing qualities, special at, per dozen.....$18.00

Patients' Bed Gowns

Comfortable, long-wearing garments for both men and women patients. Made of Pepperell cloth or Indian Head, with double yoke front, wide hems and tapes in back. Per dozen..... $13.50

Manufacturers of the famous Lys-beth Nurses' Uniform

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

The Hospital Nurses' Uniform Mfg. Co.

410-412 Elm St., Cincinnati, Ohio

of caring for the sick. Under the assumed necessity of maintaining and raising the standard of nursing service, more and more subjects have been added, until those young women who have survived the process have been trained away from the valuable portion of the true nurse's armamentorium,—the sympathetic, earnest desire to bring relief to the suffering.

Dr. O'Callaghan, medical officer in charge of the junior section of the Canadian Red Cross Society, gave an intensive study of the particular needs of his society in the province. He showed how the Junior Red Cross had assumed the financial liability of caring for numerous needy boys and girls, particularly from rural communities, and had undertaken to pay their hospital expenses. Such cases, without the assistance of the Red Cross, would become a burden on the hospitals, he said, and in view of this fact he moved a resolution that the hospitals be asked to give a lower day rate to cases under the care of the Junior Red Cross.

Rural Hospital Needs Great

Rev. Fr. Cameron, a member of the Holy Cross Hospital board, went fully into the need of development of the rural hospital. He showed how the municipal hospital might be developed into a health center for the surrounding area. He, however, emphasized the fact that the process must not be carried too far. Such a center must limit itself to those duties which it could properly perform and must show a willingness to make use of the facilities available in the larger centers, he believes.

The nursing session was held under the chairmanship of Miss Eleanor McPhedran, R.N., an overseas nursing sister, now in charge of Bowness Tuberculosis Sanatorium. Several good papers were read at this session. Of particular interest was one by Dr. D. B. Leitch, formerly of Baby's Hospital, New York City, on the "Standardization of Instructions in Dietetics for Children," with particular reference to child welfare service. He pointed out that in the development of this service he had noted a deficiency in the training given to nurses and suggested the need of special training for those nurses who expected to take charge of a child welfare clinic.

Affiliation of Training Schools

As a result of the growth of municipal hospitals in the province and the difficulty which nursing supervisors have in giving their graduates the necessary instruction and training to comply with the regulations of the registered nurses' act, the subject of "Affiliation of Training Schools" was fully discussed at this session. Dr. Allan Rankin, a member of the senate of Alberta University, brought forward for the endorsement of the convention a scheme for affiliation of training schools. The plan is elaborate, he declared, and would require considerable time before it could be brought into effect. At present the regulations for registered nurses are under control of the senate. It would be first necessary to standardize all training schools as to subjects and hours of instruction. When this had been done, hospitals of twenty beds or over would be eligible to send their pupils, after two years of instruction, to hospitals of forty beds or over for a third year. It was felt that there were many difficulties to surmount but that shortly it would be possible to assist smaller training schools in this way.

Hospital Support by General Taxes

The hospital administration and financial session was addressed by Mr. C. J. Yorath, civic commissioner of Edmonton, on the subject of hospital finances. He developed two main points for consideration, the necessity for more extensive prophylactic measures to raise the general standard of community health and relieve the hospital of an excessive number of patients, and a scheme whereby certain taxes derived from the well might be set aside to care for the sick.

Mr. Arthur K. Whiston, secretary of the provincial municipal hospitals, showed how such a scheme for financing hospitals was already in successful operation in nine municipal hospital centers in Alberta. A hospital, he said, should be considered as a public utility and supported by general tax levy. As yet this system had only to be applied to rural communities, but as a result of the financial distress of several city general hospitals it might soon be necessary to develop the scheme in the cities, he brought out.

Mr. Findlat Discusses Community Hospitals

Mr. James Findlat, a representative from the trades and labor council, gave an excellent paper on "Community Hospital Service." He laid emphasis on the success of the hospital arrangements in the great war and showed how this plan might be applied in peace. Such a system would begin with cottage hospitals for the rural centers equivalent to the field ambulance, the hospital in the chief center as the casualty clearing hospital, and lead to the large general hospital in the city where research would be developed under provincial and university control. He would have a transfer of patients from a lesser to a larger type of hospital according to the needs of the given case. Similarly would he arrange the distribution of the medical and nursing services.

The fifth session of the convention was largely devoted to the discussion of the requirements in regard to the x-ray and pathological services for rural hospitals. The idea was developed that graduate nurses might be trained in both of these subjects to an extent sufficient to carry on these services, but that some limitation should be put on the particular duty which they could safely carry out. More special work would have to be referred to specialists, and some supervision should be made of what duties they did perform. Dr. Rosamond Leacock, pathologist of Calgary General Hospital, discussed the question very fully.

Tuberculosis in General Hospital

The final session was set aside partly as a medical session. Dr. Baker, superintendent of Central Alberta Sanatorium, went fully into the question of tuberculosis and its relationship to the community and the general hospital. He showed that the healthy adult has already developed an immunity and that the early case of tuberculosis should not necessarily be regarded as a menace, at least in a general hospital. He stated that any general hospital should accept tuberculosis cases because their nurses require this type of training, and it could be received without particular danger to the nurse.

Dr. J. F. Brander of Edmonton discussed the development of prenatal clinics in connection with general hospitals.

The remaining portion of the closing session was devoted to the discussion of resolutions and election of officers. Dr. Morton E. Hall, secretary of the Alberta Hospital Association, suggested a coordination of all branches of public health for convention purposes. An interesting innovation at this convention was a demonstration of commercial exhibits, the exhibitors being allowed five minutes to demonstrate their goods. Another innovation was a demonstration of nursing improvements by nurses in training.

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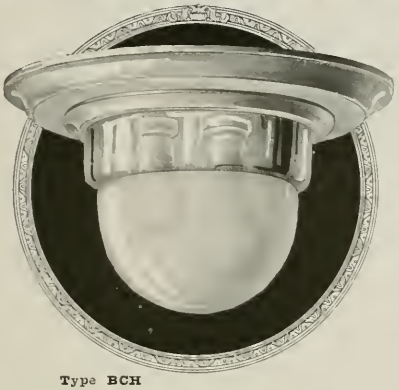

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MANITOBA HOSPITAL ASSOCIATION HOLDS FRUITFUL CONFERENCE

THE Manitoba Hospital Association held a fruitful two-day session in Winnipeg on November 7 and 8, preceding the annual conference of the Manitoba Medical Association. A strong program was carried out and round table discussions proved most profitable to hospital workers present. At a business session Dr. D. A. Stewart of the sanitarium in Ninette was elected president of the association; Dr. James McKenty, surgeon to St. Boniface Hospital, vice-president; Dr. T. G. Hamilton of the Winnipeg General Hospital, treasurer; and Miss Mary Martin, superintendent of nurses at the Winnipeg Municipal Hospitals, was re-elected secretary. Fourteen hospitals were selected each to submit the name of its own representative on the executive committee. This procedure was adopted in the hope that the hospitals thus responsible would name some one of their number certain to take an interest in the work and whose attendance at meetings would be guaranteed.

Sir James Aikins, lieutenant governor of the province, made the address of welcome when the convention was called to order at the medical college of the University of Manitoba. Important addresses of the opening day were made by Dr. George F. Stephens, superintendent of Winnipeg General Hospital, and Dr. James McKenty of St. Boniface. The work of the board of welfare supervision was traced by Mr. D. B. Harkness, chairman of the hospital section; Mr. J. D. Reid, chartered accountant, spoke on "Essentials of Hospital Accounting," and Mr. G. Stoker of the Municipal Hospitals at Winnipeg discussed "Hospital Purchasing." The evening program on the first day's schedule was given over to a round table discussion of various hospital problems; on the second evening the round table topic was announced as "Hospital and Nursing Problems."

"Boarding Houses for Sick"

The entire second day's program centered about nursing. Miss S. P. Johnston, superintendent of the Brandon General Hospital, read an excellent paper on "The Minimum of Training, Education and Equipment for Hospitals Conducting a Training School for Nurses." Miss Jean Harrison, instructress at the school of nursing at the Winnipeg General Hospital, considered in her paper affiliation in the training of nurses from the viewpoint of the larger and smaller hospitals. An interesting account of the Manitoba Central Nurses' Directory was given by Miss Elizabeth Carruthers, registrar. Miss E. Gilroy spoke on the Manitoba association of graduate nurses act and its proposed amendments.

"The term, 'Boarding House for the Sick,' is a fair designation for the cheap hospital," said Dr. George F. Stephens in his presidential address on "The Modern Hospital and Its Community Relations" before the convention. "Hospitals cannot be run cheaply but they can be run economically. Per capita costs are essential to the proper business administration of hospitals but they must be a guide only. The important point is,—'Are you giving value for these costs?' If by increasing your costs twenty-five cents you can give fifty cents more service, it should be done.

"Frequently administrative officers and boards of trustees are in such financial difficulties that they do not get the true vision of what is immediately before them and do not give that service which the community has a right to expect. There is always a temptation to curtail on the service to the patient when the per capita costs seem to be getting too high. The hospital must educate its community as to its needs and as to what the community should demand from the hospital in return. The hospital should anticipate the needs of its community and lead rather than be driven."

Hospital as Community Center

The hospital's first function, according to Dr. Stephens, is to furnish the community every facility within its power for the scientific diagnosis of disease and its treatment. It must also assist in educating all those within its walls and within its community. Finally it must act as a community center to disseminate knowledge along the lines of prevention of disease and the promotion of health.

"The function of the hospital which is attracting more and more attention is its public health aspect," said Dr. Stephens. "This must be largely based on education and a willingness on the part of the hospital to be a community center. We must reach out and bring to the hospital those who need our services. We must follow to their homes those who have been under our care. This does not mean an organized social service department but it does mean that every hospital should have the social service idea. Even the part time of one person, trained along these lines, who can combine a judicial mixture of heart and head, will be productive of much good.

"One of the great problems of the present day and one for which I am not offering any practical solution is to treat satisfactorily a very large number who, though willing and anxious to pay their own way, are unable to stand the burden that any severe or prolonged illness entails without upsetting their economic independence. The pay clinic or the diagnostic clinic, as developed in some of the larger centers is, I think, the hope of the future, but even this does not cover the hospital maintenance charges, which themselves may amount to a large sum. State insurance and extension of the workmen's compensation act may be the remedy."

Dr. McKenty's paper on "The Professional Work of the Hospital" was well received. He traced the history in the United States and Canada of the workers in the field against disease, showing how physicians and hospitals had gradually forced out undesirables and brought themselves up to higher and higher standards.

"Every year on this continent hospitals put out an annual report," said Dr. McKenty in his address, "but as far as the medical aspect is concerned, in my opinion these reports with their lists of diseases are practically valueless. I have never seen an annual report that, from a scientific point of view, was anything but valueless with its unreliable lists of diseases and deaths. I believe it is a waste of effort and money. Far better it would be to use that space by giving some information that will be of benefit to the public, such as facts concerning tuberculosis and cancer,—the early symptoms and how to guard against them. I assume that annual reports are meant for the public and for those interested in hospitals. Here is an agency that might well be used to inform the public on things on which they need enlightenment."

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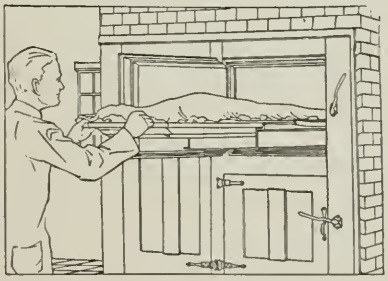

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OCCUPATIONAL THERAPY AND REHABILITATION

Conducted by HERBERT J. HALL, M.D., President, American Occupational Therapy Association, Devereux Mansion, Marblehead, Mass., and MRS. CARL HENRY DAVIS, Advisor in Occupational Therapy, 825 Lake Drive, Milwaukee, Wis.
Co-Editors: LORING T. SWAIM, M.D., 372 Marlboro St., Boston Mass., and MISS MARY E. P. LOWNEY, Room 272, State House, Boston, Mass.

THE PLACE OF CONTENTMENT IN THE TREATMENT OF TUBERCULOSIS

BY HARRY WEMBRIDGE, RECONSTRUCTION OFFICER, FORT BAYARD, N. M.

THE tuberculous patient represents a unique problem for several reasons. First, because more people die of tuberculosis than from any other one disease, and because there are or will be more ex-service men suffering from tuberculosis as a result of army life than from any other one type of disability. Since there are 150,000 deaths in the United States every year from tuberculosis, and it is estimated by competent authorities that there are ten suffering from tuberculosis at any given time to one death, any aid that occupational therapy may give to the treatment of this disease will be an aid to the extirpation of the greatest of plagues. A second reason is that no patient is ever wholly cured of tuberculosis, and unless a regime is adhered to faithfully, even after discharge, a relapse is liable to occur. The patient must therefore thoroughly sympathize with his treatment. The striking peculiarity of the treatment for tuberculosis is the insistence upon absolute rest for long periods of time, as contrasted with other diseases, where convalescence is more rapid and exercise desirable as soon as the patient feels able to take it. Tuberculous patients on the other hand, although they often feel quite well and able to exercise, must be kept quiet. This makes imperative the necessity of keeping them contented and willing to submit to the necessary regime.

Especially is this true of ex-service men who are young, adventurous and who have previously lived an active life. To them the enforced quiet of a sanatorium is well-nigh unbearable. In fact, many of the men leave the hospital, although an early death is pronounced them by the doctors as inevitable, rather than endure longer what is to them the unbearable tedium of the cure. It is imperative therefore that some method be found of insuring absolute quiet among these ex-service men who long for activity and excitement.

Veterans Revolt Against Authority

Formerly it was supposed that a patient rested if he merely remained inactive. But it is now recognized that worry of mind, discontent, boredom and irritability counteract what good might result from complete bodily quiet. Furthermore, boredom and discontent breed nervousness and an unreasonable temper, so that the patient is soon likely to avoid even bodily quiet if he can. To produce quiet of body therefore, there must be contentment of mind, and how can this be attained?

It must be borne in mind that the ex-soldier patients were for the most part privates and non-commissioned officers who in the army were subjected to rigid discipline, whose inferiority of position was impressed upon them by military rank and whose liberty of action was much curtailed. Once discharged they recovered the personal independence which most Americans crave. They now find themselves in a hospital once more subjected to a regime, unable to leave without a pass, required to be in bed at certain hours, and under the authority of doctors in army uniform. Their instinctive response is one of revolt.

Moreover, certain instincts which prompt the life action of all men, are very much more balked in their expression than they are in civilian life and even more than in the army. The constant repression of the natural outlets of these instincts tends to restlessness and discontent. For instance, it is natural for young men to be anxious for leadership, to have a certain desire for competition or pugnacity, and to be attracted toward the opposite sex. Even a normal expression of these instincts is usually impossible in the life of the hospital and the result is either nervousness resulting from repression, or on the other hand, an exaggerated or perverted behavior resulting from attempts to exercise these instincts which hinders the cure.

Compete in Unhealthful Ways

For instance, there are men who try to be leaders by conspicuous expenditure of money, the wearing of silk shirts and silk pajamas, giving of frequent parties, initiating petitions against people at the post, refusing to obey rules in order to attract attention, or instigating discontent among their own following. Others wish to be known as the "big gamblers" or "drinking men" or "fast livers." Certain patients acquire a reputation by their bravado in taking risks and disregarding their health. Others insist upon exhibitions of speed in running and physical strength, even though a hemorrhage may result. Many other cases could be enumerated, for there are almost as many as there are individuals, but all are alike in that the patient is prompted to the action by a desire to distinguish himself before an audience.

The instinct to fight expresses itself in frequent fist fights, or quarrels, sometimes with weapons, over the most

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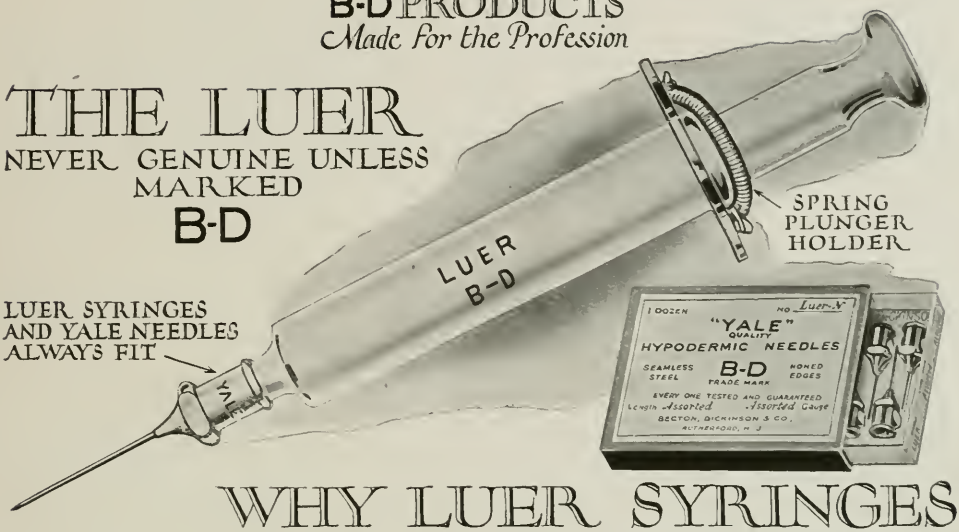

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trivial affairs; when fighting does not actually occur there are excessive criticism and factions lining up against each other. The efforts to express the sex instinct are perhaps the most noticeable of all. Many of the patients even though they have active tuberculosis and are unable to support them, marry women employed at the post or in neighboring towns. But they most usually content themselves with vulgar stories which they tell at great length; they frequently make their escape to nearby towns and exert every effort to meet women even though of the lowest type. From these excursions they often return not only having lost ground in their cure but also with social diseases which complicate the treatment.

Must Find Outlet for Instincts

The great desire for excitement shows itself perhaps more than any other way by hours of uninterrupted gambling in which large sums of money change hands rapidly. The patients return to their wards after these bouts with a rise in temperature and every mark of physical exhaustion. Of course, not all the patients go to the extremes described above—many take the cure and are more or less contented—but a large part do act in ways calculated to hinder their treatment and to make the administration of the hospital more of a problem. Although all these types of behavior can be readily found in ordinary group life, the fact that should be emphasized is that the results are peculiarly disastrous to tuberculous patients, and unless substitutes for such unhealthy group instinctive expression can be found, the hospital treatment is bound to be hampered if not rendered entirely futile.

The problem for the reconstruction officer is therefore: How can these instincts be exercised (since they cannot be wholly supressed, nor should they be), and how can the patient at the same time be kept contentedly quiet? This problem has been long recognized and attempts made to meet it by other agencies. The Red Cross with its program of games, excursions and amusements has filled a great place in the lives of the patients after this war. On the other hand, their efforts touch only the ambulatory type, and while the recreation that they offer is excellent, there may be too much of it, so that the patients become surfeited with being a passive spectator. Moreover, to become wholly dependent upon the stimulus of movies is an undesirable habit for later life. In the same way, the natural beauty of the setting of many of the hospitals helps those who are able to take short walks. Here again, however, the benefit is mainly for those who have the strength to go on excursions, although the effect of natural beauty as seen from a hospital bed is not underestimated, or conversely the discontent that arises from an ugly or monotonous outlook.

The government has been generous in its money allowance, so that financial worries need not harrass the patient. Indeed, the possession of so much ready money has tended to foolish expenditure and undoubtedly is at the root of much of the incessant gambling. If the family can live in the neighborhood and the man see his mother or his wife from time to time, it exercises a quieting as well as a restraining influence, but in very few cases is it possible for the family to add this domestic influence to the patient's life. The American Library Association has helped wonderfully those men who can read easily and who enjoy it. But unfortunately, books mean little to a large proportion of the men, at least for much of the day. The ward surgeon, if he is sympathetic and fatherly, can and does give much help to the men under his care. But all these agencies, good as they are, fail adequately to cover the situation, and it remains a problem to keep the patients contented.

It is now generally recognized that simple occupation suited to the physical condition of the patient and his mental aptitudes and desires will best serve this double purpose of maintaining quiet through contentment and interest. The first essential requirement of such occupations for tuberculous patients is that they shall be physically so light that they will not interfere with the patient's treatment. And it must be recognized that those occupations requiring great and persistent mental effort are as fatiguing as those involving physical strain. Naturally, as the patient improves he can undertake work involving not only more physical effort but also those requiring more attention and mental effort. Experience seems to show that most tuberculous patients are disinclined to accept work requiring much concentrated thought, and moreover most of the specialists are opposed to their doing it even if they want to.

This is in marked contrast to other types of patients who prefer studies with a vocational aspect, and can undertake them with normal concentration. They are and should be encouraged so to do. But the tuberculous patient, on the other hand, must not be pressed to work in the same fashion. If he is at all ambitious he is only too inclined to attack his vocational study too strenuously and thereby interfere with the rest which has been prescribed. In a sanatorium, therefore, there are few patients who are able to undertake vocational training of any but the most rudimentary sort, with the possible exception of commercial studies and academic subjects.

May Study Elementary Subjects

In any group of ex-service men there is certain to be a surprising number of men who have never had opportunity to study the lower grade subjects, or foreigners who cannot handle these matters in English, although they may be able to in their own tongue. For these men nothing is better than to study the elementary subjects, for apparently they can do so without fatigue because of the inherently simple nature of these subjects for adult minds. But the introduction of advanced subjects and professional training has not been successful, for the men either work too hard for their health because of their intense interest, or, because the subject requires exertion, are not attracted by work involving so much thought. For these reasons the following occupations have not, in our experience, proved successful in sanatoria: Carpentry, and construction, professional subjects of all kinds, advanced academic work, shop work, auto mechanics, agriculture, printing, mechanics in general. In most of these subjects, the cost of teaching is excessive and hardly warrants installation because so few could profit by it.

On the other hand, the occupations which have proved their worth are the arts and crafts, for they are interesting, and require little mental effort. Many can be done in bed or in a reclining chair with small expenditure of either physical or mental energy, and the finished objects seem to give expression to instinctive desires. For instance, most of these crafts result in finished objects which can be given to women and are taught to them by attractive women whose presence is most agreeable. Almost universally the patients are interested in making gifts for their mothers or sweethearts or for their nurses or for children. There is such a variety of things to be made that they can keep steadily at work without duplication, and moreover, not only the sex instinct but the instinct of competition and aggression has an outlet.

A good example of this is the making of bead chains.

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WILL ROSS

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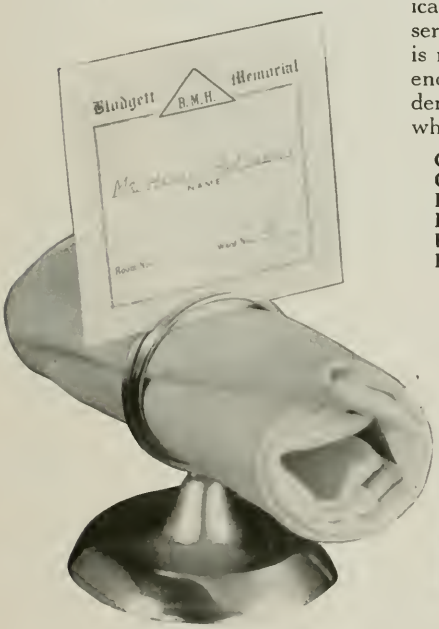

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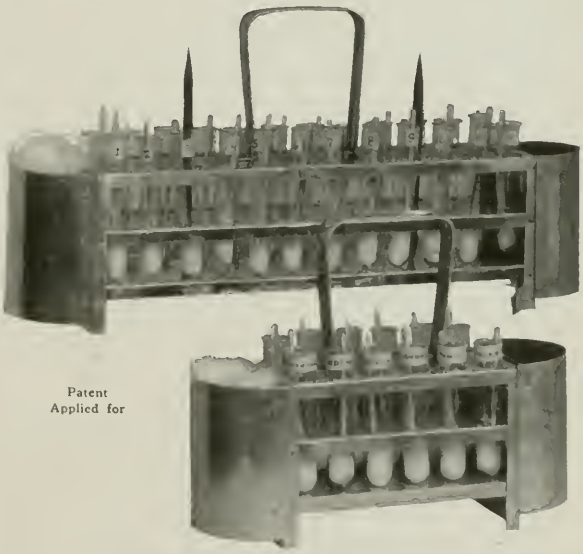

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MILWAUKEE WISCONSIN

We have in mind one man who was difficult to manage, kept requesting transfers from ward to ward, until he became interested in making a bead chain for his "girl." He has become known as a local artist in this craft, is known as one of the best chain makers, has quieted down, and, most important of all, is helping his cure by contented rest.

Basketry seems to be successful because it can be done in social groups, is light and easy, and the finished products are both saleable and highly prized as gifts. Different hospitals may specialize in certain crafts depending upon the locality. At Fort Bayard, for instance, the presence of precious or semi-precious stones in neighboring mines or creek beds, such as turquoise and malachite, gives an opportunity for jewelry making at small expense. Also the yucca and the century plant stems are well adapted for polished light wood-work, and the patient enjoys the product when he finds the stone or the wood himself.

Nonfatigue Producing Work

The following arts and crafts, as taught by reconstruction aides, have been found valuable as interesting occupations not producing fatigue. Those in the first list are suitable for all types of patients; those in the second are suitable only for those who are semi-ambulant, or ambulant:

1. Beadwork of all kinds, weaving (hand, cardboard, handlooms), knotting, basketry, raffia work, leather tooling, embroidery, designing, block-printing, jewelry, book-binding, drawing and the plastic arts.
2. Metal work, wood-carving, painting and polishing, wood toy making, tin toys, stone cutting and polishing, wicker work, small furniture and trunk making.

Must Consult Individual Tastes

Every patient is a distinct individual with needs and tastes of his own. His needs should be discussed with the ward surgeon who gives permission for him to work and indicates the kind of work he should or should not do. His tastes should be considered by the aide who assists him in the choice of his particular piece of work. Few who have not themselves been patients in a hospital ward realize the monotony of the days in which the only dramatic events are the meals. Contrast the monotony of such wards with those which are visited regularly by agreeable and well-trained aides, who help the men with work which is interesting in the process, and the finishing of which is an event to be celebrated.

In conclusion, the following statistics of the effect of occupational therapy are submitted, not because they are conclusive—such proof is almost impossible on account of the immeasurability of such general terms as contentment and morale—but because they are suggestive and, as far as the writer knows, the only ones which have thus far been worked out. At U. S. Public Health Service Hospital No. 46, Deming, N. M., 392 patients had an opportunity to take occupational work. Of these 392 patients, 263 actually took some form of work, and 129 remained unoccupied. Now, out of this 129 unoccupied, 83 men either left the hospital against the advice of their ward surgeon or just deserted. This number may seem rather large, but the hospital was only temporarily equipped and situated in a desert subject to violent and continued sandstorms. However, it should be remembered that these conditions acted alike on all the patients. Of those who took some work, only two left the hospital. In other words, of those who worked, less than one per cent left without taking the treatment, while of those who did not occupy themselves 65 per cent left.

"WHAT WOULD YOU DO WITH A MILLION DOLLARS?"

The "million dollars" referred to in the title of this article is supposed to be an extra million, the one you are not using for personal expenses and Federal taxes. The editor would devote his to the establishment of a unique institution serving the interests of rehabilitation and especially of occupational therapy. All occupational therapy aides and directors are invited to enter the "contest." Send in your suggestions; we may collect some valuable ideas if not the million dollars.

Occupational therapy is, as the initiated know, the science of prescribed work. In the careful employment of invalids and convalescents, we not only restore in them the courage and the will to do, but we discover for them the precise nature and extent of their physical and mental limitations. We learn how to direct the handicapped in their future activities. Not always is the grading downward. Quite frequently it has happened that vocational study made possible by this system has opened the way for special training and radical advancement. A patient working at some interesting task in a hospital ward or a curative workshop is a patient open to suggestion, the idle patient is more often than not unresponsive and degenerating.

But why devote a million in stage-money to occupational therapy? Because real money is actually needed. Because with so many other more obvious and pressing activities on the rehabilitation program, occupational therapy seems likely to receive rather less than its share of development and support. Occupational therapy is a necessary link in the chain of reconstruction, but the principle needs much study, much careful experimental work if it is not to be the weak link. A great deal of excellent pioneer work has been accomplished and is under way now in hospitals and sanatoriums, but the work is individual and isolated to a considerable extent in spite of national and state associations. It is more or less routine work, leaving little or no time for research and experimental progress.

Part of the income from the "million" I would devote to the salary and expenses of a field secretary under the national society. This secretary would go about from place to place carrying the latest ideas, picking up new suggestions and recommending them for the common good.

Having proceeded so far, I would establish in connection with some hospital or sanatorium a division of research in occupational therapy. This arrangement would include beds at low rates for a class of patients now sadly neglected, the professional people, nurses, teachers and the like who break down nervously under the strain of modern life, who are dependent on their salaries and who can in very many instances be readjusted to successful levels. With opportunity for careful and prolonged study of such cases, we would be sure to solve many problems of universal application and value.

If the money held out I would have conducted in connection with this clinic not only a curative workshop and vocational school, but a producing factory employing many machine and hand processes. This factory would not only afford an excellent opportunity for the retraining and readjusting of handicapped people, it would insure a considerable money return from the sale of manufactured articles and would make possible long continued employment for the badly handicapped. It could be a toy factory, a button factory, a shoe or clothing factory, anything, but it would command the advice and direction of the highest possible directing talent, thus assuring a superior product in spite of the handicap.

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THE MULLANPHY HOSPITAL is one of the oldest and best-liked hospitals in St. Louis. Smith & Davis beds and equipment were a very important factor in establishing its high efficiency and enviable standing among physicians, surgeons and patients, proving indisputably that the absolute best in hospital furniture and equipment will, in the long run, effect increased patronage as well as economy.

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Queries and Answers

RATIO OF WARD TO PRIVATE BEDS

To the Editor of THE MODERN HOSPITAL:

I have been asked to inquire whether a practical basis for a hospital of 150 bed capacity would be 60 per cent ward beds and 40 per cent private beds, and further whether it may safely be assumed that one private bed will approximately support itself and one ward bed.

Another question that I have been asked to present for your consideration is this: If it costs $750,000 to build and equip a hospital, should it be held requisite to have an endowment fund of approximately the same amount in order to assure the proper functioning of the hospital, or would one be safe in working on a smaller endowment or no endowment at all?

Assuring you of the appreciation of my committee and of myself for any interest you may show in these questions, I am

HOSPITAL COMMITTEEMAN.

The proportion of private to ward beds in Mount Sinai Hospital, New York City, is distinctly less than the proportion stated in your letter; in many institutions the proportion is about which you give; in others, again, the number of private beds is relatively greater. I think it would be a mistake to plan your hospital in such a way that the division into sixty and forty per cent would have to be rigidly observed. I mean by this that complete physical divorce of the two departments or the installation of types of service for the two so distinctive as to preclude future adjustments and to destroy all flexibility would be an error, because, after all, the response of the people of your community to the offer of service which your hospital proposes to make is still problematical.

Again, your letter refers to only two grades of service, whereas the public demand today is distinctly for three grades. Just where the intermediate class should be fitted in, and in what proportions, are questions that should be considered. Perhaps with immigration restricted as it is now, the whole of the intermediate class might be taken out of the suggested 60 per cent of ward beds; perhaps, however, some of the intermediate or semi-private beds should come out of the 40 per cent proposed for private beds. It might be well, under present conditions (immigration, social conditions, etc., considered), to think of a division into thirds.

Now as to the suggestion that "one private bed will approximately support itself and one ward bed,"—this is something that calls for analysis. Where the demand for private room service in a reputable hospital is relatively excessive, the rates for private rooms can be arbitrarily fixed. I do not think that they ought to be arbitrarily fixed, however; I do not think it fair to put a monopoly price on private hospital accommodations, even in dealing with the well-to-do. In principle, it is reasonable to ask private patients to pay fully for what they get, and full payment includes not only a sum sufficient to cover the actual cost of maintenance but a reasonable return on plant cost; and the cost per bed for private rooms, with incidental construction (offices, record rooms, operating rooms, laboratories, nurses' homes, laundry, kitchen, etc.) is nowadays quite high. Let us say, arbitrarily, that the capital outlay for each private room would be $10,000 (the private room cost is, of course, always greater in a mixed hospital than the average bed cost for the whole hospital). At 6 per cent interest, then, the rate for each private room should be maintenance cost plus $600 per year. Six hundred dollars a year will not fully support a ward bed, but it will probably suffice to pay for the average deficit on your whole number of ward beds, because many of your ward patients will pay a considerable part of the cost of their care. It is in this sense that the statement that "one private bed will approximately support itself and one ward bed" should be interpreted. It remains for you to consider whether in your city private patients could be made to pay maintenance cost plus nearly $2.00 per day per room. We have no difficulty in fixing our rates on this basis in New York, but the situation in your city may be different. I am frank to say that comparatively few mixed hospitals in the smaller towns maintain adequate private room rates.

As to the amount of endowment fund required for your hospital, I can only say that if you have an assured income of, say, $40,000 per year, you will be far better off than at least three-quarters of the now prosperous hospitals in this country were at the time of beginning their work, and that I can see nothing reckless at all in proposing to inaugurate the work of a 150-bed hospital with the building paid for, and with $750,000 in bank; for after the inauguration of the work the hospital will have three sources of income: (1) Hospital earnings (and the amount of these it will be within the power of the hospital to determine—I mean to say that the amount of free work need not be greater than the hospital can afford); (2) income from endowment; (3) current bequests and donations. The whole history of charitable hospitals in this country justifies the expectation that the last named item will not be inconsiderable. Indeed, I do not think that you could be accused of recklessness if you began with an endowment only half as large as the sum you name; with $750,000 in hand, you would certainly be playing quite safely.

S. S. GOLDWATER, M.D.

When the practice of medicine constitutes an ideal added to our profession, and we combine clinical insight and scientific research, and see in medicine a science and a philosophy, group study, group practice and team work will comprise the foundation upon which accurate diagnosis and successful treatment will be built.—Stucky.

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THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment, and Administration of Hospitals, Sanatoriums, and Allied Institutions, and to Their Medical, Surgical and Nursing Services

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THE SEARCH FOR THE IDEAL IN HOSPITAL ORGANIZATION*

By S. S. GOLDWATER, M.D., Director, Mount Sinai Hospital, New York; Formerly Consultant on Health and Hospitals to the City of New York

SIR Thomas More, the celebrated statesman and author, who added so much luster to the reign of Henry VIII, was struck by the fact that there was something about the hospitals of England in the early part of the sixteenth century that made men shun them, and in his famous *Utopia* he set forth the characteristics of an ideal hospital in a manner which has not been surpassed by any writer on hospitals, lay or professional, in the 400 years that have since elapsed. In the perfect state which More's fertile imagination evoked, the people had a tender regard for their sick:

"They take more care of their sick than of any others; these are lodged and provided for in public hospitals. They have belonging to every town four hospitals that are built without their walls and are so large that they may pass for little towns; by this means, if they had ever such a number of sick persons, they could lodge them conveniently and at such a distance that such of them as are sick of infectious diseases may be kept so far from the rest that there can be no danger of contagion. The hospitals are furnished and stored with all things that are convenient for the ease and recovery of the sick; and those that are put in them are looked after with such tender and watchful care and are so constantly attended by their skillful physicians that, as none of them is sent to them against their will, so there is scarce one in a whole town that, if he should fall ill, would not choose rather to go thither than lie sick at home."

"With the best of good-will concentrated on hospitals in countries most advanced in the arts of civilization, it has taken centuries of unflagging effort to lift hospitals to a position of safety and desirability. It was still a question sixty years ago whether the establishment of a hospital in such countries as England and France was an event fraught with good or evil. In our own day the good accomplished by hospitals is not a subject of dispute; nevertheless the precise place a hospital should occupy in the body politic, the proper seat of responsibility for its existence and work, and the principles of its organization remain fruitful subjects of investigation and debate."

With the best of good-will concentrated on hospitals in countries the most advanced in the arts of civilization, it has taken centuries of unflagging effort to lift hospitals to a position of safety and desirability. It was still a question, sixty years ago, whether the establishment of a hospital in such countries as England and France was an event fraught with good or evil, and hence we find Florence Nightingale beginning the preface to the third edition of her *Notes on Hospitals* published in 1863, in these words: "It may seem a strange principle to enumerate as the very first requirement in a hospital that it should do the sick no harm. It is quite necessary, nevertheless, to lay down such a principle because the actual mortality *in* hospitals, especially in those of large crowded cities, is very much higher than

*An address delivered at the Medical Conference at the Peking Union Medical College, September 20, 1921.

any calculation founded on the mortality of the same class of diseases among patients treated *out* of hospitals would lead us to expect."

If we may assume that hospital conditions in the United States during this period were not materially different from those prevailing in England, evidence of progress during the thirty years following the publication of Florence Nightingale's book may be found in the transactions of the National Congress of Charities held at Chicago in 1895; for it was upon that occasion that Richard Wood, a trustee of the Hospital of the University of Pennsylvania, remarked that there was still "among the uninstructed, a horror of the hospital," which Mr. Wood attributed to the fact that "the ignorant imagine the sick to be at the risk of untried remedies, and to be the subject of experiment, because poor and treated freely." But to Mr. Wood himself, and to the social and intellectual class to which he belonged, the hospital in 1895 had ceased to be a thing of terror, and had become "a tree of life, the leaves whereof are for the healing of the nations."

In our own day the good accomplished by hospitals is not a subject of dispute; nevertheless, the precise place that the hospital should occupy in the body politic, the proper seat of responsibility for its existence and for its work, and the principles of its organization and administration remain fruitful subjects of investigation and debate. As an introduction to the consideration of means by which the usefulness of hospitals may be enhanced, let us review briefly some of the principal administrative objectives of recent times.

About twenty years ago there sprang up in the United States an association of hospital superintendents, the first organization in the western hemisphere of men whose efforts were devoted to the improvement of hospital conditions. The declared object of the association was the promotion of economy and efficiency in hospital administration. A review of the earlier transactions of this association shows that the hospital superintendents of America were at that time concerned chiefly with the care of buildings and the economical purchase and distribution of supplies. Hospital management was by them conceived to be scarcely more than a form of household administration.

How strikingly this point of view contrasts with that of the progressive executive of the present day, who, without relinquishing his interest in the problems of internal institutional management, is concerned lest the hospital fail to measure up to the health needs of the community. To define the relation of the hospital to the community is today accepted as the essential theoretical problem of hospital administration; to fit the organization of the hospital for the performance of its duties as thus defined, as its fundamental practical problem.

If the symptomatic treatment of disease in the individual no longer satisfies the scientific clinician, the mere sheltering of the sick in order that such treatment may be administered no longer satisfies the thoughtful hospital administrator, who seeks to bring organized medical practice under the influence of the latest and most approved scientific conceptions of disease. The path of scientific medicine proceeds through the several branches of pathology to causation and prevention, and it is along this path that organized medicine, represented chiefly by the hospital, is advancing. Numerous surveys undertaken by American communities in recent years clearly indicate this trend. The object of such surveys is to determine the character and the incidence of existing disease and to disclose relevant environmental factors, and on this broad basis to define hospital function and to formulate hospital program. The logical result can be nothing less than an attempt to levy upon and skillfully to organize all the available resources of society for the prevention and cure of disease.

That in one of its aspects hospital administration is a branch of domestic administration need not be denied, but orderly household arrangement is today regarded as the least of hospital problems. The hospital has become conscious of its duty as a center for medical research in preventive as well as in clinical medicine, as an instrument for the training of physicians and nurses, as a school where the laws of health may be imparted to the laity, and even as an avenue by which statesmen may be led to perceive the danger of any social or industrial system which disregards the health of the people.

John Morley in his "Life of Voltaire" tells of Voltaire's youthful intellectual limitations under the narrowing influence of social life at the court of France; he describes Voltaire's escape into England and indicates the enlightenment which resulted from Voltaire's challenging and stimulating contact with a free people and their institutions. When Voltaire returned to France, says Morley, he "had tasted of the fruit of the tree of scientific reasoning and had become alive to the central idea of the social destination of all art and of all knowledge." Intellectual and social influences no less potent than those which influenced Voltaire's later career have recently been at work to widen the horizon of the hospital administrator and to reveal to him the social character and destination of the institution over which he presides.

The three great types of hospitals in the modern world are the public hospital, managed by public officials and supported wholly by public funds; the private non-sectarian hospital; and the sectarian hospital, likewise under private control. Each of these types has distinctive characteristics, but all reflect in greater or less degree the scientific, social, and economic standards of the period.

The private or voluntary hospital, upon which the people of England pride themselves as peculiarly an English institution, is dominated by the belief that bureaucracy, with all that the term implies of the inflexible and unpitying application of rules, lack of initiative, and loss of spontaneity, is the worst of all possible influences in a humane institution, and the last of all possible forms of control which should be tolerated by free men. The English system, transplanted in America and in the British Colonies, has flowered vigorously, but neither in the overseas dominions of Britain nor in the United States has there been such uncompromising insistence as in England on absolute freedom from all subordination to or official relationship with government authority.

Generously supported by voluntary contributions, while neighboring rate-supported or state hospitals were receiving insufficient doles from the public treasury; free to experiment with both construction and organization, while public hospitals were fettered by official restrictions; so situated as to be able to take a leading part in medical and nursing education; giving generously to the poor and deservedly applauded as an expression of the more kindly qualities of the Anglo-Saxon race; limited in size and therefore free from the evils of machine-like administration which cling so tenaciously to great institutions, the voluntary hospitals of England were long regarded as the supreme charitable effort of modern society at its best. Nevertheless, the English voluntary hospitals, compared with voluntary hospitals in other parts of the English-speaking world, have seemed to some to be mistaken in their refusal to utilize any of their facilities for the treatment of the well-to-do, as well as in their uncompromising determination to steer clear of official control. The traditional English policy has apparently delayed the day of hospital coordination, without which a comprehensive community program for the conservation of health cannot be achieved. Just now some of the hospitals of England seem disposed to reshape their program so as to provide service for social classes heretofore excluded from their benefits. A drift of policy is likewise discernible in Great Britain in the direction of partial state support.

In the United States voluntary hospitals have been widely developed along sectarian lines. The religious instinct, often suppressed under the stresses of modern economic life, is apt to reassert itself when illness appears. The sufferer who is racked in body and mind finds peace most readily among fellow-believers. Eager to render service, the churches of America have vied with each other in the endowment of sectarian hospitals where service is offered alike to rich and poor, and where tender nursing care and a sympathetic religious atmosphere are often regarded as of greater worth than mere efficient business organization or even, may I say, than accuracy in diagnosis.

State vs. Voluntary Hospitals

In the types of hospitals which we have just been considering, ideals of freedom, sympathy, and religion determine to a great extent the general character of the hospital, and fix the nature of the controlling authority; but there are countries where these motives do not freely operate, sometimes because the underlying human instinct is not sufficiently developed, sometimes because means are lacking, and again on account of political conditions. In the latter connection, one thinks of continental European countries where organized medical service, originally almost wholly an affair of the church, has become an accepted function of the state. Even in those parts of the world where the voluntary hospital, sectarian or non-sectarian, has flowered most luxuriantly, the insufficiency of available private funds, the tendency of voluntary hospitals to focus their attention on certain classes of the sick to the exclusion of others equally deserving, and the imperious demands of social hygiene, have caused the state to set up public hospitals for the purpose of filling gaps in the voluntary system.

There are two respects in which the state hospital occupies a position entirely distinct from that of the voluntary hospital; the first is its acceptance of the responsibility of society as a whole (in contradistinction to that of sectarian or other groups) for medical relief; the second is its support, at least potentially, by all the resources of the state. There is no limit to the share of its wealth that the state may devote to the protection of the health of its citizens, and there is no social or invalid class which may logically be excluded from the benefits of a state medical service, once instituted. The principle of state responsibility for the care of the sick having once been accepted, the extent of its application becomes simply a question of expediency. In its narrowest application, state medical service is limited to the care of persons suffering from communicable disease, and here the dominant motive is the protection of

society, rather than the care of the sick; in its widest application, it includes not only every useful variety of hospital, but, reaching out beyond the walls of the hospital, it seeks to provide medical treatment in the school, in the workshop and wherever such treatment may be required, even to the extent of providing constant oversight of the health of citizens, in all the circumstances of life, from infancy to old age.

Specialization of Labor

While the progress of a hospital toward efficiency may be accelerated or retarded by its status as a public or a private institution, social, scientific, and economic forces play upon all types of hospitals without regard to their official relations. Perhaps the greatest single factor in modern hospital development has been the specialization of labor, a process which may be observed both in the medical branches and in general hospital administration. The intensive cultivation of limited areas of thought and action is a phenomenon characteristic of our age. It has left its impress on all the sciences and on most of the arts, but in medicine its first strong impulse has now been expended, and the period of differentiation, which tended to separate medical practitioners into many classes, has been followed by an irresistible demand for the coordination of the efforts of the different types of practitioners. Thus we have arrived at so-called "group medicine."

In the earlier days of specilization, specialists in New York and elsewhere sought to acquire the facilities necessary for the free development of their art through the establishment of independent hospitals of limited scope. They were forced to do this by the refusal of the departments of general medicine and surgery to yield ground to them. For a time the internist and the general surgeon were able to maintain their opposition to clinical innovations. But the specialists, working in hospitals of their own, outside of the general hospitals, progressed rapidly in the development of an invaluable technic, and it was not long before the need of their services began to be felt in the general hospitals; at this time consulting specialists were added to the regular hospital staffs. These consultants were at first simply called in occasionally to assist in diagnosis and treatment, but in the course of time the hospitals perceived the advisability of providing separate wards together with suitably equipped treatment rooms and laboratories for the special clinical branches; and thus the departmentalized hospital emerged. The change that we have just outlined was most quickly effected in hospitals which were affiliated with medical schools, for it was in such institutions that the need of varied and comprehensive clinical facilities was first experienced.

One of the things that stimulated the development of hospitals made up of a number of medical departments, combined and coordinated in such a manner as to permit of concerted clinical effort, was a growing appreciation of the fact that, indispensable as may be the specialists' contribution to the welfare of the hospital patient, it is prudent not to regard this service as self-sufficient or final, but wise rather to estimate it as a link in the chain of cooperative clinical relief. The time is approaching when the specialist will not be willing to treat most of his patients unaided, and when public opinion will decline to sanction such treatment, even if the specialist be willing.

Disregarding for the moment the personal equation, and considering merely the question of method, one may today with reasonable accuracy appraise the clinical efficiency of a hospital by ascertaining the number of separate departments which contribute to diagnosis and treatment. If it is not always true that sound practice prevails where team work flourishes, at least we may say that the opportunities for effective medical work are greatest where team work is highly prized. Broadly speaking, then, it may be said that a notable advance has been made toward hospital efficiency, first, by the training of special types of practitioners, and then by the coordination of the activities of the several skilled groups.

Advance in Laboratory Medicine

While the clinical development of the hospital was proceeding along these lines, laboratory medicine was following a parallel route. The single pathologist who, thirty or forty years ago, was able without an effort to satisfy all of the scientific demands of his clinical associates, has been replaced by a numerous laboratory staff, each member of which finds plenty of work to do in his chosen specialty, whether it be tissue pathology, bacteriology, pharmacology, serology, radiology, or cardiology, but in this field also the attempt to achieve perfection by intensive specialization has been followed by a growing appreciation of the dangers of isolation and by a demand for a close working arrangement between the laboratory and clinical groups.

The successive phases of laboratory development are reflected by the manner in which hospitals have planned and erected their laboratories. A historical study of hospital plans tells the whole story. Beginning in 1870, when hospitals were frequently planned without laboratories of any kind, one finds in succession the following laboratory types: a single, rather small room; a small pathological laboratory combine with the morgue;

a larger laboratory, equipped for pathology and bacteriology, still combined with the morgue; suites of rooms in the arrangement of which chemistry finds a well recognized place but which, despite a growing intimacy with the clinical departments, continue to be located in basements or in other remote places; differentiation of the general from the clinical laboratory, the latter becoming an important annex to the ward; and finally, a stage in which the intimate collaboration of the laboratory and clinical divisions of the hospital is recognized and promoted by the grouping of the wards and the out-patient department about a central building which contains a great variety of laboratories—which contain, in fact, all that the hospital is able to afford in the way of specialized diagnostic and therapeutic equipment.

Automatic Retirement of Physicians

About thirty years ago, a feeling of restlessness swept over the hospitals of the United States and Canada. Under the leadership of a few men of genius, magnificent work was being accomplished in one or two centers, and a standard of achievement was thus set up which stirred others to action, prompting widespread reorganization. But how to proceed was a problem, for in many instances, when a new scheme of organization was proposed, it became apparent that the key positions in the clinical organization of the hospital were held by men not abreast of the times, and that no matter how the organization might be changed on paper, the result was likely to be the reinstatement of some of these influential men in positions directly athwart the path of progress.

In this situation the conviction grew that youth with its modern training would save the day, and in order to create positions for young men of promise, a plan was widely adopted for the automatic retirement of the incumbents of clinical positions upon reaching a certain age, or upon the completion of a definite term of service. America was at least thirty years behind England in resorting to this expedient. French sympathy with the idea that men of mature years involuntarily impede progress is somewhat touchingly expressed by Duclaux, who, recounting in his study of Pasteur the difficulty experienced in obtaining among medical practitioners a hearing for advanced biological conceptions, says: "Physicians are those I would wish to lay hold of, and I begin to fear that I shall not succeed. I know very well that old physicians do not read any more, and that when they do read, do not understand."

Although, here and there, a useful hospital career has perhaps been cut short by the policy of systematically replacing older with younger men, the net result has doubtless been advantageous to progress; but so simple a rule of procedure does not and cannot of itself invariably bring about an ideal hospital organization. Let one clinician be replaced by another, and if both have the same outlook on life, even though one be old and the other young, the same stagnation will result. How to insure perpetual progress is the problem.

Teaching Hospitals More Useful

Is the problem automatically solved when teaching is introduced? Is teaching the magic word? I need but recapitulate the familiar arguments in its favor. To the teacher, surrounded by the eager and inquiring minds of youthful students, is given a sure and constant incentive to discover and rediscover truth. The mind of the teacher is perpetually refreshed. The conscientious and well-endowed teacher can hardly fail to become observer, thinker, questioner, discoverer, leader. To him is given the opportunity through his influence upon the minds of his students to project himself indefinitely into the future. In the atmosphere of the school research is born, and research is the key to the hidden secrets of nature. Thus the greater usefulness of the teaching hospital is apparent. But all teaching hospitals are not alike in their organization; standards are lacking, and appear to be needed. We arrive then at the question of hospital standardization.

Can a type of organization, a method of hospital administration, be prescribed which is suitable for all places and all times? It may be useful to formulate the principles of hospital function and organization, but to define in exact terms the character of the organization and to limit the activities of the hospital within the terms of the definition is to obstruct progress. Standardization so conceived is a more pernicious influence than state control or bureaucracy, for a bureaucrat may change his mind, while the written word is inflexible. Nevertheless, standardization becomes a useful instrument when understood simply as a means of upholding minimum standards.

The standardization of hospital work is no novelty. Standards exist wherever the state through legislation has defined the conditions under which medicine or nursing may be practiced in a hospital. The formation of voluntary organizations for the promotion of standards beyond those thus prescribed by the state is an indication that there exists a professional or popular demand for safeguards not yet demanded by the authorities. Such a movement, expressing high ideals, stamps as

sub-standard the hospital which does no more than conform to the modest requirements of the law.

In a large country, where educational and social conditions are not uniform, the highest standards cannot be widely established or uniformly maintained either by law or by voluntary associations, but a conscientious effort to determine and define those things which are the indispensable attributes of honest scientific work—for example, accurate records of clinical and laboratory observations—may be extremely useful. Standardization thus conceived encourages inspection and publicity, and keeps alive a sense of responsibility; it promotes a healthy rivalry among hospitals, and generates a demand for better things.

Flexibility in Hospital Planning

The consideration of the basic principles of hospital planning is relevant to the present discussion; for while anywhere and under any physical conditions the competent and resourceful physician will find a means of helping his patient, a hospital in which many physicians are employed cannot function smoothly in the absence of a sound physical basis for its operation. The plan of a hospital suggests and to a certain extent influences its development, its organization, and its methods of work. Serious attempts have been made to insure perfection in hospital organization by means of hospital planning, but it is evident that the physical arrangement of a hospital which is planned and erected at a given moment in the history of medicine can do no more than meet the requirements of that moment. The hospital which is complete today is inadequate tomorrow. The most that can be done in the planning of a hospital is to satisfy, after careful inquiry, all the demands of the period. A constant need of all hospitals at all periods is the need of change, and the most important single principle in hospital planning is undoubtedly the principle of flexibility. Other important principles of planning are unity, diversity, hygiene, and economy, to each of which brief attention is due.

Modern medical treatment involves a wide variety of diagnostic, therapeutic, and nursing procedures, and an elaborate domestic economy. A well ordered hospital necessarily contains many clinical and other subdivisions; the specialized character of these subdivisions readily suggests the splitting of the hospital into many parts, and hence the architect is apt to be led away from the fundamental idea that the hospital is an organic unit, which cannot function vigorously unless all of its departments work in harmony; but upon the due recognition of the principle of unity the successful operation of the hospital largely depends.

A glance at hospital activities at once discloses many diverse functions. Certain principles of arrangement are valid, respectively, for particular departments of a hospital. If the architect considers separately each distinctive function and plans for it appropriately a variety of structural outlines will emerge. If he then proceeds to build for each function, regardless of its place in the general scheme, chaos will result. While the value of diverse forms must be recognized, the necessity of combining these forms into a practicable unit must not be overlooked. On the other hand, if a plan is adopted which is too simple and which is selected on account of its correspondence to some particular hospital function, the resulting building may be satisfactory in part but will not give satisfaction as a whole.

Must Build for the Future

A hospital building in which the qualities of unity and diversity have been happily blended may be a perfect instrument at the time of its completion, but, as I have already said, unless a certain measure of flexibility is added, the building will not long serve as a perfect instrument. Social changes, community growth, scientific discovery, create new demands, which every hospital is called upon to meet. Healthy hospitals are growing hospitals. New discoveries are constantly opening up new lines of medical treatment which call for additional space-consuming therapeutic apparatus. Nursing standards and the methods of recording work done are forever advancing. A hospital which begins as a medical boarding house is eventually called upon to participate in health education, in teaching, in scientific research. Pressure is constant, both from within and from without, and the hospital must be in a position to accommodate itself to every new and reasonable demand.

Hygiene is one of the most vital of all principles in hospital planning; a hospital which is not rich in health values is a failure. Health values in hospital construction do not reside exclusively in smooth walls, smooth floors, and rounded inner corners, but include certain features or characteristics which tend directly to the promotion of health, such as the proper orientation of wards, the sun exposure of balconies, roofs or other outdoor space accessible to patients, effective ventilation, quiet bedrooms for night nurses, proper dormitories and recreation rooms for all resident officers and employees, a cheerful and tonic general outlook; and also features which aid in the prevention of disease, such as receiving wards, quiet rooms, isolation wards, steriliz-

ing equipment of many kinds, and sanitary construction.

It is a mistake to consider building cost apart from maintenance cost. Broadly speaking, economy of use is more important than economy of production. A concentrated institution is cheapest to build and to operate, but in our discussion of the diversity of hospital function we saw that extreme concentration and simplicity of design ultimately defeat their own ends. An economical hospital is one in which every cubic foot of construction gives maximum prolonged service.

Some Principles of Hospital Planning

Systematic consideration of the details of hospital planning would be somewhat out of place in the present discussion, but I may at least be permitted to emphasize how indispensable to efficient work are wards in the planning and arrangement of which due consideration has been given to the personal comfort and the privacy of patients, to the requirements of case grouping for purposes of study, to the value in certain disease conditions and in most climates of treatment out of doors, to the need of suitable examining and treatment rooms, to the installation and placing of the apparatus which modern nursing service demands. Outside of the wards, apart from the always present and indispensable kitchen and laundry, the heating, lighting, and power plant, and the business offices, departments which on account of their intimate relation to the clinical and scientific functions of the hospital and to staff efficiency call for the most careful consideration in hospital planning, are the admitting and social service departments, the outpatient department, the diagnostic and research laboratories, various therapeutic departments, diet kitchens, record rooms, library, teaching rooms, and residential quarters for doctors, nurses and others.

Lack of time forbids any attempt to examine at length the details of the medical, nursing, and business administration of the hospital, but I wish to record my conviction that in the field of acute diseases the general hospital in which the clinical specialties are combined, and in which alone a proper coordination of effort can be secured, is preferable to a loose aggregation of independent institutes which favor isolation and which afford no automatic corrective for the mental habitudes of the specialist. That in-patient and out-patient services are best conducted under single control and with the members of the same staff functioning in both departments, and that it is contrary to the best interests of physicians, of patients, and of society, to establish hospitals for the exclusive benefit of either rich or poor.

Teaching is not a function of the university hospital alone. Hospital staffs everywhere should cultivate the teaching habit, and their efforts to do so will be richly rewarded by public and professional recognition and by enhanced usefulness. It is with feelings of mingled admiration and pity that one contemplates a hospital which ministers successfully to its patients and to its patients alone—admiration for its beneficent work and pity for its failure to make its work count to the advantage of all of the sick in the locality, a result which can readily be won by encouraging physicians not identified with the staff to use the laboratory facilities of the hospital, to consult its library, to visit its wards, and to attend its clinical conferences.

The School of Nursing

The hospital which aims to reach the highest pinnacle of usefulness will conduct a school of nursing, but will not assign to its younger pupils tasks for which they are not yet fitted. It will be careful in the choice of those who instruct its pupils, and will pay them adequately. It will keep in mind the need of mental stimulation for instructors and supervisors, as well as for pupils. To overcome the tendency to mental stagnation, it will vary the tasks of its permanent staff from time to time, will provide a well furnished library for use of its staff members, and will arrange lectures and demonstrations for their benefit. It will exclude from the school those who are not physically fitted for nursing work and will guard the health of its nurses by limiting the hours of their employment, by providing suitable dormitories, by furnishing plenty of wholesome food, by installing facilities for recreation, by establishing a system of periodic physical examinations, and by applying the most approved scientific means for the prevention of diseases to which nurses are exposed.

Throughout the hospital there must be respect as well as tender regard for the sick; the spirit of service must be shared by all. Brilliant physicians cannot preserve the sanctity of a hospital which disregards the needs and rights of its most humble workers, and thus deprives them of self-respect and of a sense of the usefulness and importance of their work. In the ideal hospital, the health of the workers will be deemed as precious as that of the patients; and lest under the pressure of a multitude of tasks this essential duty be forgotten, let me urge each hospital to keep a record of the sickness occurring among its employees so that the duty of maintaining among the working population of the hospital a sickness rate at least as favorable as that which prevails in the community at large may never be forgot-

ten. Let the hospital be a real health center for the members of its own organization.

A moot question among hygienists is just what constitutes an ideal unit for purposes of health administration. I am confident that a big city is not such a unit, for although for the purpose of controlling environmental factors which are inimical to health, large-scale organization is necessary, the creation of health habits in the individual may be regarded as the foundation of public health, and in a great community the individual is beyond the effective reach of central authority. It has been said that the family is the ideal administrative health unit; the school is by some so regarded and the workshop by others. But the hospital is family, school, and workshop combined. Conceived in a spirit of service for the protection and promotion of health, possessing every known resource for the attainment of its aims, the hospital, whether public or private, sectarian or non-sectarian, while seeking to render perfect service to its patients, should strive to become a model household where health and happiness prevail.

MATERNITY HOSPITAL LICENSING LAW UPHELD BY HIGH COURT

The Supreme Court of Minnesota in a recent decision upheld the constitutionality of the state law requiring the licensing of maternity hospitals. This is the first decision on such an act handed down within the last three or four years. In the appeal to the higher court two questions were raised: Whether the law was unconstitutional because it embraced more than one subject; and whether it violated that article of the constitution guaranteeing due process. The opinion of the court reads:

"The statute defines a maternity hospital for the purposes of the act and provides for its licensing by the state board of control. Conducting such a hospital without a license is a misdemeanor. Regulations are presented for its conduct and for the health and well-being of the inmates, and the public welfare is in view. . . . We are unable to see that the act contains anything which is not germane to the title. Within the constitutional sense it embraces but one subject.

"The statute is a police regulation. Its purpose is to secure the health and comfort and well-being of the inmates of the hospital and to safeguard the interests of the public. That in doing so it somewhat restricts the activities of those conducting maternity hospitals, if the restriction be no greater than is reasonable, is not important. Others than the owners are interested. . . . Many callings having to do with public health may be regulated. Whether the licensing of maternity hospitals should be regulated, as it is by the statute drawn in question, was a matter of legislative discretion; and the statute invades no constitutional right of the defendant under Art. 1, Sec. 7 of the State vs. Women's and Children's Hospital Association.

"We do not agree with the counsel for the defendant that the statute grants to the board of control arbitrary power to withhold a license, regardless of conditions, so that it is therefore void. The statute is paternalistic. So are other statutes in the exercise of police power. It contemplates an investigation and consideration of conditions and a supervision and regulation by the board; but an arbitrary refusal of a license is not intended.

"The only questions decided are that the title of the act is sufficient within the constitutional requirement, and that in the exercise of the police power the legislature may require maternity hospitals to be licensed."

HEALTH CENTER IS OPENED IN NEW YORK

Welfare agencies have combined with health agencies in the unique health center recently opened by the New York County Chapter of the American Red Cross in the upper East Side of New York City.

Twenty-one organizations, ten of which are devoted to community and family welfare, while the scant majority are concerned with health and nursing, have joined forces in an effort to make this most congested section of the city healthier as well as better. The city department of health has taken the lead and is accompanied by a variety of health agencies, such as the American Social Hygiene Association, the New York Tuberculosis Association, the Association for the Prevention and Relief of Heart Disease, the Association for the Aid of Crippled Children, and similar organizations. Side by side with these are the relief agencies such as the State Charities Aid Association, the United Hebrew Charities, the Catholic Charities and the Association for the Improvement of the Condition of the Poor.

A system of "health bookkeeping" has been adopted by the new health center to make sure that it is adequately covering the needs of the district. Through constant surveys of this area of 100,000 people, the center aims to discover any gaps in its health and welfare program and to introduce new agencies that will fill the needs.

A number of important health moves have already been brought about through the agency of the center. With the cooperation of the city department of health and the American Red Cross, the Schick test has been given to more than 52,000 school children. Fifteen hundred children of pre-school age were prepared for school in the fall. Physicians from the city department of health have examined them physically, while psychologists from Teachers College have graded them mentally. A Red Cross nurse has attended to the removal of physical defects.

Drugs, hospital supplies and equipment, and hospital clothing from Red Cross stocks in Europe and the United States are being shipped into Soviet Russia in increasingly large quantities to be distributed by the American Relief Administration, it is announced. Efforts in this direction are being concentrated on the disease-ravaged provinces of Kazan, Simbirsk, Samara, Saratov and to a limited extent in Petrograd and Moscow.

"Drugs and hospital supplies are extremely scarce and satisfactory medical and surgical work is in consequence impossible," writes Dr. Henry Beewukes, who is directing the distribution of the medical and hospital supplies. "A leading surgeon in Simbirsk told me that they draw thread from clothing to secure suture material. Hospitals are congested and have long waiting lists.

"Our present plans contemplate the supplying of existing hospitals and clinics with drugs and hospital supplies essential to their operation, the organization of clinics at food distributing centers in areas without medical facilities, and the inauguration of measures to prevent and combat diseases in areas in which we operate."

THE NEW BUILDING OF THE BABIES' HOSPITAL OF PHILADELPHIA

By JOHN DIVEN, M.D., Associate Medical Director, The Babies' Hospital, Philadelphia, Pa.

THE new building of The Babies' Hospital of Philadelphia embodies the evolution and experience of ten years; consequently any description of it must be preceded by a short history.

The work of the organization began in 1911 as a country hospital for the treatment of summer diarrheal cases. At that time the imperative need was for emergency treatment, where the greatest good to the greatest number might be immediately accomplished. This seemed best brought about by the creation of hospital beds. At the end of the first summer it was learned that those babies who had gone home well had suffered subsequent illnesses, and that the mortality among them was astonishingly high. This proved the need for adequate "follow-up" work. Visiting nursing was instituted, which in turn showed the need of additional medical supervision; thereupon the medical dispensary was established. Naturally, new families came to the dispensary for examination, treatment and advice. In so far as possible, dispensary and home treatment was given. In other cases hospital or institutional residence was necessary. During the winter months we were obliged to send these patients to other hospitals, except in 1913 and 1914, when The Babies' Hospital was kept open and well filled with respiratory and nutritional disorders. In the summer months, only the diarrheal complaints could be handled at the hospital, because of the limited space and the great number of these cases. Other cases were referred elsewhere.

The visiting nurses, constantly in touch with the hospital and dispensary families, urged that mothers bring the children to the dispensary regularly for observation and advice. In case of any illness, immediate visits were urged. The dispensary was housed on the first floor of very humble quarters in the poor district of the city, within a few blocks of the present new building. The staff consisted of one physician, who devoted about one hour a day to the work, and one woman, who was clinic nurse, visiting nurse, social worker, and clerk. As the work grew—and it grew rapidly—additional workers were employed and it became necessary to increase the working space. Larger quarters were soon outgrown.

The city building of The Babies Hospital of Philadelphia.

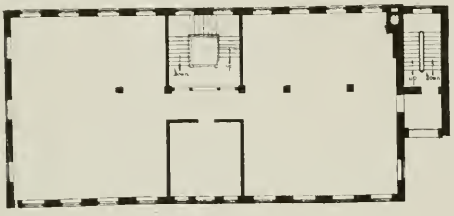
At this time the corporation was presented with a property in the country to which the hospital was moved. Here the idea for permanent buildings in the country came up and comprehensive plans for such buildings were prepared. A little later the organization received a sum of money to be used specifically for city work. The comprehensive plans and deliberations for the hospital included a building in the city for the following purposes:

1. Accommodation and control for ideal dispensaries.
2. Administration headquarters for the entire organization.
3. Adequate facilities for pediatric meetings and welfare conferences, and for teaching medical students, nurses, nursery maids and parents.
4. Facilities for research into pediatric problems.
5. Living quarters for staff.
6. Hospital quarters with proper isolation, for emergency cases or for cases requiring special study.

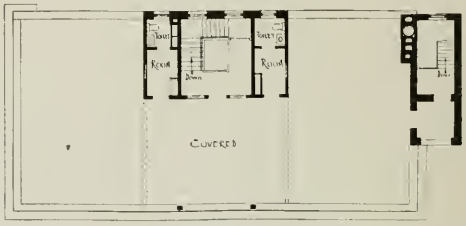
The original donation created the desire to erect the large center unit. More money was

needed and a campaign in December of 1917 resulted in sufficient funds to erect and equip the present building. The plans for the building were evolved about the needs of the organization as enumerated above. Work was begun in the spring of 1919 and the building was formally taken over in December, 1920. Since then most of the equipment has been placed and the various departments gradually instituted, though the new plant is not yet in full operation.

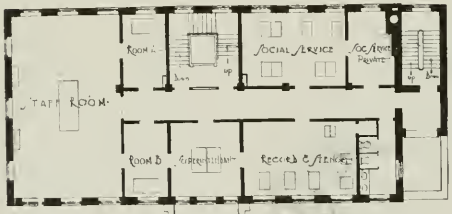
The building is located at Seventh and DeLancey streets on a plat of ground approximately 90 by 100 feet. This location has unique advantages. Light and air are assured on three sides by an open school yard to the south, sixteen-foot building restrictions to the west across Seventh street, and fifty feet of our own ground to the north on Cypress street. To the east, or fire-tower end of the



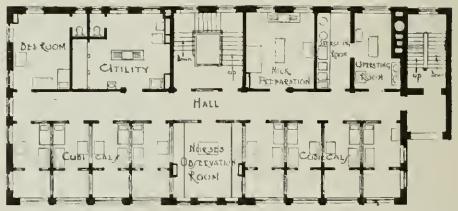
THIRD FLOOR PLAN



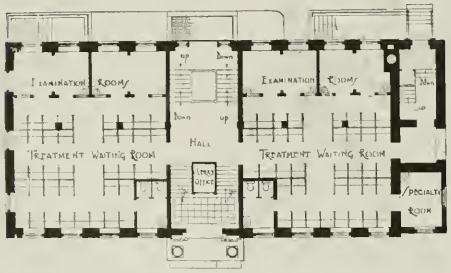
ROOF PLAN



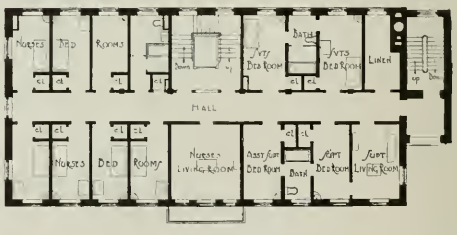
SECOND FLOOR PLAN



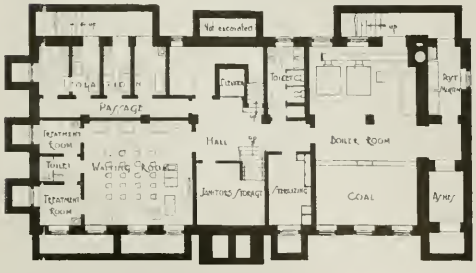
SIXTH FLOOR PLAN



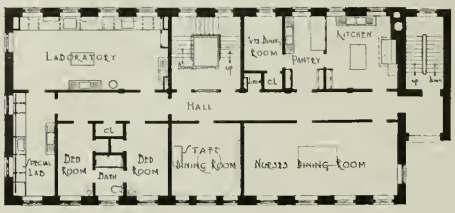
FIRST FLOOR PLAN



FIFTH FLOOR PLAN



BASEMENT PLAN



FOURTH FLOOR PLAN

building, the property abutts three-story dwellings. The architectural style of the building is Georgian. The walls are of tapestried brick and hollow tile, with limestone trimmings. All floors and supporting inside walls are of reinforced concrete. Partition walls are gypsum block. Floors, walls and ceilings round into one another. Angles are avoided wherever possible. The building dimensions are 40 by 90 feet.

Doorway showing information and admission booth.

The entrance is in the middle of the building and on DeLancey street, two steps above the sidewalk level. Immediately inside is a marble vestibule 15 feet wide and 7 feet deep, to the right of which eight steps descend to the basement and to the left eight steps ascend to the first floor. An information booth is placed across this vestibule between the two stairways. It faces the door, thereby giving its occupant full control of the entrance. From this point patients and visitors are directed.

Dispensary on Main Floor

The basement is one-half above the ground. One-third of the space is devoted to boilers, pumps, furnaces, coal and ash bins. Only low pressure steam is provided, and that for heating. A small room under the fire tower, with exit to a rear areaway, is equipped and used for a mortuary and post room. A room at the foot of the stairs is used for drugs and supplies. Adjoining this is a small space for mattress and clothing fumigation and space for x-ray and fluoroscopic work. An automatic electric elevator and machinery are to the opposite side of the building from the entrance. Stairs encircle the elevator. In the southwest corner of the basement is a room 21 by 21 feet designated as a special clinic and demonstration room. It contains a lecture and demonstration desk with a removable top which covers a sink and stove inserted in soap-stone. Space below is arranged for cooking utensils. Chairs, blackboard, scales and measuring paraphernalia complete the equipment. Just off this room are two small examining rooms with toilet and washroom between. Each room has running water

Inside the cubicle may be seen the bedside table with single-service diapers and baby's wardrobe built on the radiator. The crib is on the porch.

A view from cubicle No. 1 showing detail of the adjacent cubicle with its bath slab and with the baby in the crib. Had this photograph been taken from a point level with the eye the details of all cubicles could be seen.

and low sink, examining table, two chairs and a desk-table. This clinic is so arranged as to take care of demonstrations to mothers, nutritional teaching, prenatal care, and if necessity should demand, vaginitis could be taken care of at a different hour. On a separate hallway are four small isolation rooms with exists on an area-way leading to the street. Any case which is possibly contagious is directed to one of these rooms where it is examined by a physician and proper disposition made. Each room is equipped with examining table, two chairs, and a desk-table. A sink with running hot and cold water, paper towels, a covered metal waste bucket, and gowns for physician and nurses complete the equipment.

Ascending from the vestibule one enters an open space, 15 by 15 feet, in front of the elevator and stairs and between the two dispensary waiting rooms. The two sides of this dispensary are exactly alike except that on the east an extra

Looking toward the corridor end of one of the cubicles. The nurse's gown, a spray bath and the goose neck over the sink for washing the hands may be seen.

room is obtained immediately to the front of the fire-tower. This room is devoted to the specialties and is fully equipped for eye, ear, nose, throat, and dental work. The dental clinic is the first in Philadelphia to care for children under six years of age.

Across the north end of each side of this floor are four consultation rooms for doctors and social workers. These rooms are small (8x8 feet.) Each has a window and in each is a lavatory with hot and cold running water. The equipment consists of a small desk-table, two chairs, and an examination table of special type. These rooms are so constructed, by means of folding-doors, that two can be thrown together and double space obtained for teaching or demonstration work. The remainder of each side of the floor is devoted to waiting room. In each waiting room are thirty-six compartments. These are metal "stalls" 3 feet wide and 3 feet deep, with a bench seat along the back wall. The partition is six feet in height with a space of six inches at the bottom to facilitate cleaning. A few larger stalls are provided for mothers bringing several children. The stalls are so arranged that there is a wide aisle in front of each row to permit of easy passage.

A mother with her infant enters the building and is assigned at the information booth to a definite stall or isolation room, and to a physician. At the head of the steps she is met by the dispensary nurse, who has received from the clerk at the information booth the patient's dispensary record. She is conducted to a stall where she is seated and instructed to undress the baby and wrap him in the blanket or sheet provided. While the mother waits here the routine medical history is taken by a nurse. The baby is weighed, temperature, pulse and respiration taken and recorded, and the chart sent to the examining room of the physician treating this family. The scales used are on a table which has large rubber-tired wheels so that it can be pushed from stall to stall. This table also carries individual paper protectors for the scales, two receptacles for thermometers (white for clean, blue for used), and a jar with sterile vaseline. There is an attached basin with solution for washing the hands between cases. By means of the stalls, the individual scalecovers, blankets, thermometers, etc., it is the intention to prevent the mild, as well as the severe, cross infections.

The nurses' observation room gives an unobstructed view through the four cubicles on the east side and through the cubicle porches. A Leonard valve, controlling the bath temperature, may be seen in the left corner.

A visiting nurse is in attendance upon each doctor and makes written notes for home instruction. The social worker is within call so that medical and social work may go hand in hand. The same physician treats all children, both sick and well, in

One end of the demonstration room. The desk is uncovered to show the inserted stove and sink.

any one family. It is here that doctor, nurse, social worker and patient meet and confer. "Well babies" enter at the same time as sick ones—it is our experience that few are "well" and none are not needful of medical instruction and advice. To separate well babies from sick babies we have found impossible, and in well-baby clinics most frequently contagious disease has been found. To direct the well babies and sick babies to separate clinics requires complete physical examination at each visit, or supernatural vision and infallible judgment.

This dispensary floor is the very heart of the building. It is true that at present conferences or clinics are held only at stated hours, although a nurse and resident physician are constantly in the house for the care of emergency cases. Should it become necessary at some future time, it will be possible to maintain constant dispensary service. This work decreases the need for hospital beds, but should there be a case which in the opinion of the medical director requires hospital care or special study, it is sent to one of the emergency beds or to the hospital proper in the country.

The second floor is the administration headquarters for the entire organization—city, country and seashore. Immediately in front of the elevator and stairs is the superintendent's office with a small private office to the right and to the left a large room for stenographers, clerks, telephone switchboard, and records. Across the hall from this room is one of equal size which is given up to the visiting nurses, each of whom has her individual desk and files. A small room adjacent is the office of the head social worker, where she may be interviewed by parents or by workers from other agencies at any time.

The specialty room, where treatment for teeth, eyes, ears, nose and throat is given.

A view of the milk preparation room from the corridor, showing the hand basin, combined sterilizer, pasteurizer and bottle-cooler, electric food-mixer, carriage for storing and conveying bottles, which can be used in any part of the room as a table, large sink with double drain boards, large center work table and refrigerator.

The other side of the milk room, showing the center work table, gas stove, refrigerator and supply cupboard.

Across the hall from the superintendent's private office is a room of similar size—the office of the organization's medical directors.

Twenty-one feet of the west end of this floor is devoted to the staff-room and library. It is here that all board and committee meetings are held. This room is also available for the smaller pediatric, nursing, or general welfare meetings, and it is proposed to collect here a library on pediatrics and allied subjects.

The third floor is vacant awaiting future development. It was added at the last moment to prevent the necessity for additional building over the ground space. It has been considered that this floor might readily be thrown into operation as wards in case of a severe epidemic or catastrophe. At present it makes an admirable place for larger meetings or assemblies.

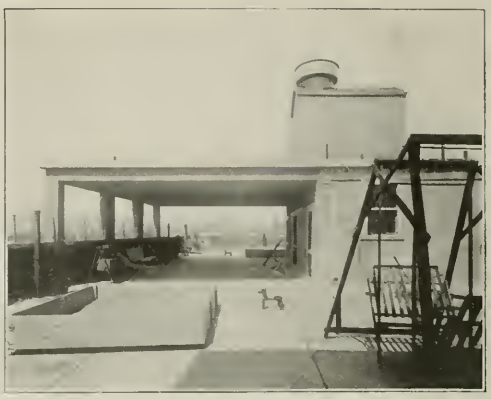
The fourth floor is devoted to laboratories, doctors' quarters, dining rooms and kitchen. The staff dining room lies directly in front of the elevator and stairs, while to the east is a large dining room for visiting nurses, house nurses and nursery maids. It is so arranged and insisted upon that the visiting nurses and social workers meet here at lunch to report and discuss problems that may arise in their daily routine and to create closer contact and cooperation. Immediately across the hall are modernly equipped kitchen and pantries.

The northwest fourth of this floor is a room 15 to 31 feet assigned to general laboratory, with complete equipment. Adjoining this room is one 21 by 8 feet which is thoroughly equipped as a chemical laboratory. Across the hall and adjoining the laboratory are the doctors' quarters—two bedrooms and a bath. Convenience and comfort is assured by basin with running water, large closet and complete furnishings.

The fifth floor is devoted to dormitories and living rooms for the nurses and nursery maids. Each nurse has a separate room with lavatory and running water, a large closet, and complete bedroom furniture.

Nurse Sits in Glass Room

The sixth is the hospital floor. Here instead of the usual cement floor, "marbleloid" has been used to facilitate cleaning. As on all other floors a five-foot hall runs the full length of the building, assuring ventilation. Immediately in front of the elevator and stairs, and across the hall as one enters the floor, is a room 15 by 15 feet, designated as the nurse's observation room. It is here that the head nurse has her desk, charts, and supplies; and here are placed, under her control alone, the Leonard valves which govern the temperature of the water used for the babies' baths. This room, as well as the cubicles, has walls solid 32 inches from the floor, above which there is 3 feet of plate glass. The remaining space to the ceiling is solid wall, while in the cubicles it is copper screening to secure better ventilation. Solid removable panels are provided for closing these spaces if it should be found desirable. It can readily be seen that the nurse in her observation room has an unobstructed view into and through the four cubicles which lie on either side. She may see every baby in its bed or in its bath. She may observe the nursery maid in attendance on any baby; in fact, one might say she is constantly with all the babies.



The roof. The middle third, in front of the pent house, encloses the elevator shaft and service rooms. The usual playground equipment is prominent.

A view of the field workers' room, showing files and individual desks.

The cubicle is 8 by 8 feet with a porch 5 by 8 feet. Double doors open fully outward, giving a four-foot space for the passage of the crib. Porches are separated by the same walls as are the cubicles with the outside exposure screened. Each cubicle is equipped for one baby. Our own specially designed baby bath is of porcelain, 42 inches long by 20 inches wide, with an eight inch apron. The interior is divided into a slanting bath-slab with a two inch rim, and a basin drain. It is 32 inches from the floor and is supported on wall brackets. The slab is 28 inches long by 16 inches wide, covered with a rubber mat. Over the slab portion of the bath is a water outlet with thermometer, rubber hose and shower-head. The drain basin is arranged to take care of materials from the irrigations, etc. Over it is a high goose neck under which the hands and arms of the attendants are washed in running water. In the baby's room only liquid soap is used. The crib has a stationary 32 inch mattress height with adjustable sides. The bedside table has a shelf for the single-service diapers, and a drawer containing

The general laboratory.

a specially designed block into which are fitted all of the small articles necessary in the care of the baby. This outfit includes receptacles for safety-pins, cotton, toothpick swabs (used only for cleaning under the nails), and treatment powder; three small bottles for possible treatment solutions, thermometer, vaseline jar, comb, applicators, tongue depressors, medicine droppers, scissors. A chair is provided for a mother visiting or nursing her baby. Over the radiator is a specially constructed metal cabinet wardrobe, with a door opening down and out serving as a shelf. This cabinet has a perforated bottom so that the heat from the radiator may warm the contained linen and blankets. Two tightly covered buckets are provided, one for soiled diapers and one for soiled linen. The diapers are emptied into an incinerator and the soiled linen into a canvas bag in the utility room, and the buckets are sterilized daily. Behind the corridor door is a hook for the gown which the nurse wears when in the room.

Room for Milk Preparation

Across the hall at the west end of the building is a special cubicle 15 by 10 feet with an attached toilet. In addition to the equipment of the other cubicles this has an adult bed, a wardrobe, a dressing table, a rocking chair and a screen. This room is provided should it be necessary to keep a mother with her baby, a wet-nurse or a special nurse. Next to this room is the utility room with large supply closets, a double-drain sink placed in center of room, slop sink, cabinet for drying clothes, utensil sterilizer, incinerator, nurses' toilet, lavatory, laundry bags and container. Under the window behind tightly fitting doors, communicating with the outside for ventilation, is a space for storing stools for doctor's description and examination.

On the opposite side of the stairs is the milk preparation room, which is 15 by 18 feet. The corridor walls and door of this room are of plate glass so that the milk room may be under supervision as are the cubicles without unnecessary entrance. This room has a center work table with a soapstone top 30 by 60 inches; there is a cupboard for supplies and utensils; a refrigerator divided into small compartments, each designed to hold baskets of feedings for certain hours, thereby avoiding the necessity of opening the entire refrigerator at any one time; a four-burner gas stove; a sink with double drain and swinging goose neck; an electric machine used for passing curds and vegetables through fine sieves; a combination sterilizer, pasteurizer and bottle cooler; and a hand sink. Sterile water is piped through the wall from water sterilizers in the adjoining room. A specially designed cabinet on large rubber-tired wheels can be used as a table in any part of the room. Sliding doors open into a compartment on each side, in which nursing bottles are stored. This room is designed and equipped to prepare and store formulæ for 100 babies. Such a contingency might arise in our dispensary work.

Next to this room are two small rooms, the first containing dressing sterilizer, water sterilizers, instrument sterilizer, utensil sterilizer, slop sink, dressing cabinet and table. The other is a fully equipped operating room for emergency surgery. All sterilizers are gas heated.

The scales are fastened to a table which has large rubber-tired wheels. This is kept in the corridor and wheeled to each cubicle door for weighing the baby. Individual scale covers are used. Set into the wall in the corridor is a cabinet for medicines. This is kept under lock and key in the hands of the head nurse. The equipment of this floor is entirely white enameled steel.

The extreme isolation and protection of patients is provided because there are emergency beds and because only special cases, probably in the house but a short time, are admitted. When a patient has passed the stage of emergency he is transferred to the hospital proper, or discharged to his home for dispensary care and observation. It is our conviction that proper isolation is cheaper than quarantine, entirely aside from the suffering and

Looking down the center aisle of one of the waiting rooms with "stalls" on either side.

the cost in life incurred incident to the cross-infections.

Visiting is discouraged and the parents allowed but one visiting hour a week unless the patient be in a serious condition. Visitors must leave coats and hats at the elevator landing on metal costumers placed there for this purpose, and must put on hooded gowns before entering the floor.

The seventh floor is the roof garden. On either side of the elevator and stairs is a room fitted up as a toilet, washroom and service room. The middle third of the roof is covered, while the remaining two-thirds are open. There is the usual playground equipment for the children, benches and comfortable lounging chairs for the mothers, and small bassinets for the babies. The purpose of this roof is to provide a place where mothers and children may escape the extreme heat of the city streets and slum districts for a few hours during the day or night. An attendant is on duty during rush hours. It has also been considered that this roof might be used for certain outdoor classes.

Thus in addition to a hospital in the country and a convalescent home at the seashore, there has now been established a dispensary, one unit of a system, which through its conferences and its home instruction, spreads throughout the community health promotion.

In the construction of this building, in carrying out our plans to meet the unique purposes, Mr. Carl A. Zeigler, the architect, has been most patient and persevering. In addition he has combined a beautiful architectural design with simplicity and utility.

A NEW RECORD IN HOSPITAL CAMPAIGNS

By ROBERT T. KINGSBURY, Trustee and Chairman Executive Committee, Elliot Hospital, Keene, N. H.

NO BLATANT publicity, no "sob stuff" no browbeating played a part in what Keene and Cheshire County, New Hampshire, believe to be an unparalleled exhibition of community giving for hospital purposes. A recent campaign for the construction of a Community Hospital brought from the citizens of Keene a per capita gift of $18.69, based on the figures of the last census. The amount, of course, was not subscribed by the entire citizenry of Keene, but by 2,914 contributors who gave on the average $72 each. In the small agricultural community about Keene, the average pledge was $32.50, the county total being $63,358, or twenty-six per cent over its quota.

HELP BUILD YOUR NEW HOSPITAL
From Ourselves $225.000 For Ourselves
Keene Needs
Keene Calls
Keene Cares.
Keene Must
Keene Can
Keene Will.
CHESHIRE COUNTY'S HEALTH IS CHESHIRE COUNTY'S WEALTH
Each Red Light Means $.000
The Hospital Helps Everybody—Everybody Help the Hospital
To Light them all YOU must pledge generously
Each Red Light Means $.000

Section by section and story by story, citizens of Keene and Cheshire County watched on a billboard the construction of their new hospital as it materialized through their gifts.

The Community Hospital campaign in Keene

and Cheshire County was twenty-one and a half per cent oversubscribed, the amount in excess of the sum needed for construction and equipment purposes to be used to increase the endowment of the institution. The cost of the entire campaign was less than six per cent of the amount subscribed.

Twenty-nine years ago, when Hon. John Henry Elliot presented the old Elliot estate with its colonial residence dating from 1825 and several acres of land, as a hospital to the city of Keene, the foundation for the new $225,000 community hospital, which will be built this year, was laid.

After four years of management the city found it impracticable to continue its control and with the consent of the donor, it was transferred to a corporation and has since been under the management of its board of trustees. Local organizations and individuals provided for the furnishing of the hospital and much of its financial support, and although incorporated as the Elliot City Hospital, it met for many years, as the only hospital in Cheshire county, the entire demand that existed. Some time later the Edward Joslin Memorial Home for Nurses was built adjoining the hospital. This has been repaired and renovated during the past few months and is probably adequate for the present.

An Appreciation
To a Citizen Who Has Met His Civic Duty
In Our Greatest Civic Cause
The grateful acknowledgement and sincere thanks of the community is hereby expressed to
M
for your pledge which will help to build the new hospital
There can be no nobler effort than the alleviation of human suffering and the saving of human life Your gift personifies the highest type of citizenship It makes your community a better place in which to live
Your example of civic responsibility as a citizen who has become a co-builder of the people s new hospital is a proof that our people are loyal This loyalty will be further shown by your whole souled co-operation now that you are an actual founder of the new hospital in encouraging your fellow citizens to follow your leadership
In recognition of your gift the Trustees of the hospital and the Executive Committee in behalf of the entire campaign force cause this certificate to be inscribed in your name
For the Trustees and the Executive Committee

Good psychology was employed by the committee in preparing official and formal acknowledgment of subscriptions in such a form that the contributors could exhibit them with pride.

Ten years ago, when the public began to realize more and more that a hospital is the best place for treatment of ill and injured persons, the inadequacies of the existing plant began to be felt, first by the medical profession and then by the relatively small group of citizens familiar with the work of the hospital and the increasing demands made on it.

Just before the World War, the trustees and the physicians began seriously to consider the provision of extensions to care for the increasing number seeking treatment in the hospital. When war came, expansion plans were thrust aside. The influenza epidemic and the national shortage of nurses next gave pointed emphasis to the need of providing enlarged hospital facilities for this community and the residents of the twenty-two towns of the county. Our hospital by then had become thoroughly unable to supply the volume of service that the common good demanded and patients from within this district were, in large numbers, forced to go elsewhere.

Community Plant Decided Upon

Last spring the first active steps toward the realization of the plan to make proper hospital provisions for Keene and the county were taken. The first problem was the scope of the new plan. It should be understood that Keene, with a population of 11,500, is surrounded within a radius of twenty miles by twenty-two towns of Cheshire County with an average population of less than 1,000. It seemed safe to assume that none of these towns nor any group of them could possibly provide hospital service for themselves except in conjunction with Keene. This city might have remodeled its existing obsolete plant to provide adequate facilities for Keene alone for $100,000, but the vital needs of the surrounding towns was equally important and the first decision was that it must be a true Community Hospital. A reorganization was effected, the incorportors were increased from twenty to fifty including men and women from the several towns as well as Keene, and the board of trustees was enlarged to fifteen members instead of five.

The new trustees begun a careful study of the community's hospital problem. The hospital, through local connections, has had a consulting staff of prominent physicians and surgeons in Boston and other large cities. First, a survey of the health needs of Keene and Cheshire County was made by these and local physicians. It was agreed that the existing institution had outgrown its usefulness and that a new hospital building

with a capacity of sixty patients should be constructed. The trustees devoted considerable time and thought to the various phases of the problem, making visits to many other hospitals and obtaining counsel and advice from communities where similar hospital expansion needs had recently been met.

Undertaking Seemed Impossible

When a decision on the additional hospital facilities that were necessary had been reached after months of consideration, the trustees turned to the question of the design of the proposed new institution. Several hospital architects were consulted. They appeared before the trustees at separate meetings. Then a man of wide experience in the design of large and small hospitals was chosen. This architect, with the trustees and local physicians, made a detailed study of hospitals in communities similar in their hospital requirements to ours. The architect prepared plans which utilized the present hospital building for administrative and laboratory purposes, continued the present nurses' home and specified a new hospital building. A careful estimate of the cost was obtained and thus the sum required to erect and equip the new institution was determined. The figure was $225,000 which, in the face of existing business conditions and the relatively small population, seemed an almost impossible undertaking. The trustees felt, however, the need was so urgent, not only for increased hospital facilities but for an institution that should conform to the standards of the American College of Surgeons and should be large enough and broad enough to provide a complete training school to relieve the serious shortage of graduate as well as student nurses, that no postponement could be considered.

A model of the Community Hospital group put the goal of the campaign graphically before the public.

The next step was to present the need of the new institution to the public and to obtain from the people the funds for its construction and equipment. This was regarded as the most difficult task to be solved in providing the hospital that was so urgently needed. Thought and study by the trustees convinced them that to raise a fund of $225,000 from a city of 11,500 population and from the 20,000 people of the twenty-two scattered towns in the county, it would be necessary thoroughly to develop every resource. This, they believed, could only be done with the assistance of trained and experienced organizers who had conducted similar movements successfully. After investigation in other New England cities, where through organized appeals large funds had been obtained for construction purposes, the trustees engaged the services of an experienced campaign executive.

Preparing for Campaigns

Early in September an office was opened in the Chamber of Commerce and the preparatory work under the guidance of the director and his trained staff was begun. It was realized that the success of the movement depended upon the thorough education of the public in what the existing institution had done and was doing in the growing need of Keene and the county for more adequate hospital service, and in the necessity of building a larger new hospital if the health needs of the county were to be met with reasonably adequate facilities.

First, the service which the hospital had given and its present struggle against the severe handicaps of an overcrowded and insufficiently equipped plant were presented in terms easily understood by the public. This was done through the newspapers and by means of circulars. An analysis of the number of patients from each town in the county who had been cared for was made and the number of days' care given to the residents of Keene and to those of each of the county towns in the past 29 years was graphically shown by a map of the county which was published widely.

Course in Hospital Finance Given

Next, what amounted to a course in hospital finance was given through the newspapers and by direct mail to the public. Among other things, this included an interpretation of the hospital's accounts since its founding. The public was made to realize that a large portion of the hospital's service had been given without compensation. The fact that it cost nearly $100,000 more to care for the patients than they paid was visualized in graphic statements. For example, it was shown that whereas the average cost per patient for the last fifteen years had been $2.10 a day,

the average income had been only a little more than $1.50. That the public might realize the difficulty of financing the hospital's work, it was shown in simple terms that last year, when the ward rates were only $1.50 to $2.00 a day, the average cost per patient per day was $3.13. That the hospital was really a public service institution began to be recognized.

Preparation of a map showing that there was not a complete general hospital within forty miles of Keene, wide publication of the fact that there was only one hospital bed for each 1,000 residents of the county, and a widely disseminated statement showing that the present institution was far from adequate, were next in the program of the educational campaign preceding the appeal to the people.

A full statement of the existing hospital facilities, the recommendation of recognized outside hospital officials that a new modern hospital should be constructed, and a definite estimate of the cost of building and equipment, were submitted to the people. The Chamber of Commerce, the Women's Club and other organizations passed resolutions endorsing the undertaking to establish the new hospital and urged the public to support the movement to raise the $225,000 that was required.

Campaign Organization Perfected

Trustees and other influential business and professional men were organized as the executive committee. They began late in September to organize a force of 350 men and women throughout the county. This force in a series of individual interviews was to lay the evidence in support of the program to establish the new hospital before the residents.

In Keene 125 men and 125 women were organized in groups or teams. In adjoining towns similar groups with local chairmen were organized. This large body was formed in a period of four weeks. All this time the educational campaign was increasing in intensity.

The presentation of the hospital's case to the public in advance of the actual appeal began to show evidence that the people were being thoroughly awakened to their responsibility in the provision of proper facilities to meet their own health requirements.

A staff of speakers who became intimately familiar with the present facilities, the policy of the hospital's management, its limitations, and the need for a new and larger hospital began to spread the essential facts of the hospital situation throughout the county. These speakers addressed fraternal organizations and spoke at the motion picture theaters and other places of public assembly. These addresses, the newspaper articles and other means of publicity helped to create a more general understanding of the functions of a modern hospital and the relations of such an institution to the welfare of the individual as well as to that of the whole community.

Hospital Week Declared

Then arrived the critical week. The question whether the people would give the fund to build the new hospital was to have its answer. The force of citizens, organized and ready, had become familiar with the hospital situation in every important aspect. They knew the facts because they had studied the carefully prepared statements of the need and had attended meetings at which the appeal was carefully analyzed.

To the number of 350, the workers assembled at the City Hall on October 21 to launch our biggest community undertaking. Orville E. Cain, the mayor, and the president of the hospital board, Maj. Frank Knox, editor of the Manchester Union and an advocate of health betterment activities in the state, Windsor H. Goodnow, prominent merchant and state official, and others, addressed the meeting. The high points of the appeal thus were presented in vigorous addresses. The long hoped for civic effort to provide proper safeguards for the public health was actually under way.

Each member of the force of citizen workers the next day set out to lay the need of the new hospital before a selected list of residents. To the public a statement giving the outstanding features of that hospital's need, with illustrations showing the new building, describing its new features, which were to include a maternity department, an x-ray department, bacteriological and pathological laboratories, as well as a large surgical department, had been sent out.

The week of the appeal had been proclaimed as Community Hospital Week by the mayor. The clergy had referred to the need of an adequate hospital from their pulpits the Sunday before. The speakers had been presenting the case nightly. The motion picture theaters were exhibiting slides showing the new hospital and giving facts about the need. Posters were in store windows and business buildings throughout the county. The correspondence of business concerns contained a printed summary of the hospital needs of the community and a statement of how they could be met by the new hospital. An illuminated model of the new hospital group in a prominent store window attracted much attention. A splendid cooperation had been developed and was everywhere in evidence.

That the public might follow the growth of the fund a billboard, containing a recessed painting

of the new hospital building covered by a curtain on which appeared scaffolding and preliminary masonry work, was erected on Central Square. Each day that part of the new building, provided by the gifts obtained, was shown by raising the curtain and exposing part of the recessed picture of the new structure. Red lights around the edge of the novel recording device were lighted for each $5,000 subscribed.

From the first day it became apparent that by taking the public into partnership in the undertaking and by having devoted almost two months to the constant presentation, always along dignified lines, of the health needs of the community, the inability of the present institution to meet them, and the proposed solution of the problem through the building of a new hospital through public subscriptions, the executive committee had assured widespread support for the movement.

The first day of the returns, $50,000, was reported subscribed by the workers at the initial rally report supper. Five such meetings were held in the city hall and when the final reports were received, the total was carried to $273,465, given by 4,862 subscribers. On the closing evening, the square in front of city hall was filled with givers who were not going home until they had learned the final results. When that announcement was made, every electric light bordering the unique billboard burned red and ten more red lights were hastily added on a strip over the top. The church bells began ringing, cheering crowds and blowing whistles proclaimed that no longer were our people to be denied the best hospital service that modern science could provide.

Appeal Made to Reason

What is regarded by the several hundred public-spirited men and women who raised the fund, with its 21½ per cent over subscription, as one of the most gratifying features of the undertaking, is the fact that throughout the movement there was not a single evidence of the use of coercive measures to obtain subscriptions.

In no sense was the undertaking a drive. No one was browbeaten into giving. The hospital put its case frankly before its public. The movement was fundamentally an appeal to the reason of the people. That this, rather than an emotional appeal, was the best course is evidenced, we believe, by an analysis of the figures. In Keene 2,914 contributors gave $210,106, an average subscription of $72.00 and according to the last census a per capita gift of $18.69. This was 20 per cent in excess of the quota of $175.000 and further evidence of the general high standard of giving in the fact that there was but one pledge of $10,000 and three $5,000. The county total of $63,358 was twenty-six per cent over its quota of $50,000 and was pledged by 1,948 subscribers. This was an average gift of $32.52 and we feel that it was a remarkable result for small agricultural communities. Investigation of similar campaigns for hospitals has led us to believe that our results establish a new standard of community giving for hospital purposes. The amount subscribed beyond that needed for construction and equipment will be used to increase the endowment of the hospital, which is now almost $100,000.

The hospital, as a result of going frankly before the public in the manner indicated, has gained at least 4,000 new supporters who subscribed liberally because the hospital succeeded in convincing them by facts alone that it is an institution that merits their support.

Campaign Cost Was Low

The attitude of our citizens during the three months that has elapsed since the movement ended, and their present interest in the hospital make many of us feel that the situation has so firmly established itself in the public mind and its relation to the public welfare is so generally understood that its future financial needs are certain to be met as they develop. This, of course, can be done only by making our new needs clearly understood by our enlightened citizenship, whose gifts have now assured our long hoped for and much needed new hospital.

Ground will be broken for the new hospital in the spring and it will be completed January, 1923.

The total cost of the campaign, including all expenses incurred in the many phases of the undertaking, was less than six per cent of the total of $273,465 raised. Subscriptions were payable in semi-annual installments over a period of two and one-half years. This plan was used because it was felt that under existing conditions the public could not give in cash the amount needed.

From the very first days of planning we went forward with the determination that the immediate raising of the fund was not our ultimate goal. That we should blaze and leave behind us a trail of good will always leading to a vision of closer community spirit and civic advancement seemed equally important. And now, three months after our success, the raising of the fund almost pales before the greater, intangible brotherhood of Cheshire County, of a greater good will between city and towns than has ever existed.

METHODIST ASSOCIATION TO MEET

The annual meeting of the National Methodist Hospitals and Homes Association will be held February 15-16 in Chicago at the auditorium of the Methodist Book Concern, it is announced.

WINNIPEG MUNICIPAL HOSPITALS HAS SPLENDID NURSES' HOME

By GEORGE STOKER, Secretary and Business Superintendent, Municipal Hospitals Department, Winnipeg

BUILT at a cost of $389,000, exclusive of furnishings, and having accommodation for 187 nurses and female help, the new nurses' home for the Winnipeg General Hospital was designed by Mr. R. E. Davies, city architect, acting in conjunction with Alderman A. H. Pulford, chairman of the hospital commission; George Stoker, secretary and business superintendent; E. H. Rodgers, inspector of buildings; Mary E. Martin, superintendent of nurses; and Thomas Townsend, hospital engineer. Messrs. Carter-Halls-Aldinger were the general contractors and the building is unique in the sense that the city of Winnipeg entrusted its design entirely to its own staff. The building has four stories and a basement and is fireproof throughout. The outer walls are of solid brick faced with tapestry brick and having trimmings of Tyndall stone. The brick is of a reddish brown and the whole outer effect is relieved by the interesting placing of wings and rhythmic spacing of windows and also by the sub-division of the windows themselves.

Floors are of reinforced concrete supported by means of reinforced concrete beams and posts, and all dividing partitions of solid two-inch plaster and four-inch hollow terra cotta tiles.

The basement is sub-divided into lecture room, gymnasium, private laundry, linen supply room, trunk room and helps' recreation room with serving room, dressing room and kitchenette attached. On this floor is also located the steam room connected to the main power plant of the institutions by a tunnel six feet six inches high by five feet wide. Off this steam room is the cage into which the soiled linen chutes discharge. It is situated at a point convenient for loading at the delivery entrance nearby. Off the main corridor of the basement is a public toilet.

The floors of the basement are all finished in hardwood with the exception of the corridor, trunk room, kitchenette and steam room which are faced with asphalt. Wood trimmings are finished in golden oak satin rubbed effect and the walls and ceilings painted in soft harmonious flat washable colors, excepting the trunk room which is faced with cement and lime washed. Double tiers of racks support the trunks, and ceiling lights are located over each gangway.

The fact that the building is set up well out of the ground is responsible for perfect daylight in the basement everywhere but in the trunk room where artificial light is sufficient.

Entrance to the trunk room is obtained through two sets of double doors allowing easy access and egress for trunks either to push button automatic elevator opposite, in case a trunk has to go to a room, or to the delivery entrance when a nurse is coming or going. This delivery entrance has an inclined asphalt grade permitting delivery rigs to back down to the doorway and thus avoid unnecessary lifting and handling of heavy pieces.

The linen supply room is located with a view to easy delivery of laundry baskets and the subsequent distribution of linen to floors via the elevator.

The first floor consists of a capacious pillared entrance hall painted in soft flat stone effects with doors, window trimmings and dado's in quartered oak, antique finish.

The floor is of patterned grey terrazzo. At the left of the main entrance is the office and elevator and at the right a men's cloak and dressing room for use during entertainments.

The hall leads directly to the reception room through double oak doors with bevelled plate glass panels. The reception room is eighty feet by thirty-five feet and is capable of subdivision into three smaller rooms for everyday needs by the use of accordeon folding doors.

The floor and all woodwork is of oak, finished in a dark antique color as also is the woodwork of the mantel and trimmings of the fireplace, the latter relieved with marble panels the edges of which are faced with burnished steel.

The paper on the walls is stippled grey with suitable frieze and the large Scotch Axminster rugs are also in grey with border of darker shade of the same color. Softly contrasting with these greys are the rose and blue of the furniture tapestries and the overcurtains. The overhead lighting fixtures in the hall and reception room are of the indirect type radiating soft amber tinted colors and these are supplemented by well-placed oxidized embossed brass wall brackets at each side of the fireplace, and at other convenient points, as over secretaries, etc. These wall brackets are of the double vertical candle type, the light bulbs capped off with miniature shades of bright colors.

Two sets of double French doors and an abundance of large high windows, each having diamond shaped center panels as a motif, results in an abundance of natural light and at the same time gives access to a screened veranda of spacious dimensions, making a favorite retiring place

GLIMPSES OF THE NEW NURSES' HOME OF WINNIPEG MUNICIPAL HOSPITALS

Center—The new nurses' home from its western elevation. All other elevations overlook the Red River of the North. Top—One of the music rooms or sun parlors which open off the entrance hall. Upper left—A view of the entrance hall. Upper right—A smaller sitting room such as is provided on the upper floors. Lower left—The main reception room. Lower right—A sleeping balcony overlooking the river.

between dances or on warm summer evenings.

A kitchenette equipped with sink, cupboards, refrigerator and electric hot plates from which light refreshments may be served, is conveniently adjacent.

At one end of the reception room is a disappearing platform sliding on castors into or out of the wall like a drawer. This is faced to match the base-moulding around the room and except that it is equipped with two drop handles is entirely unnoticeable. In case of speech making or entertainment of any kind platform accommodation is thus obtained at a moment's notice.

At the opposite end of the room are connections for the motion picture machine.

Furniture is of Jacobean oak with an abundance of all-over upholstered Chesterfields and inviting looking easy chairs in heavy tapestries with odd pieces in stained reed to lighten the effect, whilst across the entire library end of the room is an immense built-in oak bookcase with sliding doors and diamond shaped leaded glass panels to match the windows. Here a branch of the public library is maintained for the benefit of the staff.

The entrance hall, looking directly through to a reception room. Gray terrazzo floors with pillars and walls in stone and woodwork in dark oak produces an imposing, yet restful effect.

At either end of the entrance hall, separated from the reception room by the corridors leading to bedrooms and furnished with all glass fronts and a westerly exposure, are sun parlors. These also serve as small sitting rooms to which a nurse may take the members of her family or other intimate friends for a private chat.

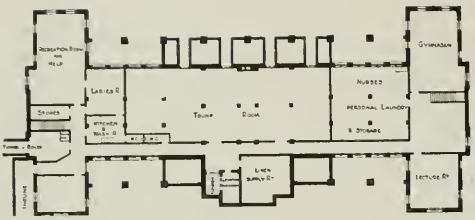
With the exception of the superintendent of nurses' suite the remainder of the main floor is given over to bedrooms all of which are of a standard pattern. Each end of the building has its complement of baths, lavatories, and toilets, every set of baths having a shower bath room equipped with head and body sprays.

Bedrooms facing east and west open direct to sleeping balconies and those at the north and south extremities of the building have access to the same balconies through doors leading from corridors. All doors are large enough to pass a three-foot bed, and there is outside sleeping accommodation for everyone. The balconies are ten feet wide allowing adequate room past the foot of beds for another bed to be wheeled to some other location if necessary. These balconies are all screened and the floors finished in asphalt. The end rooms not opening directly on to balconies and being larger than the standard single bedrooms are given over to dietitian, charge nurses, etc., and those holding the more important positions.

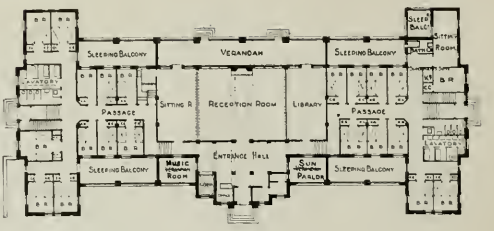
The average size of the standard single bedroom is seven feet eight inches by thirteen feet six inches minus a clothes closet four feet deep by three feet wide equipped with a hat shelf with rod beneath and a shelf for booths nine inches from the floor. The placing of closets, doors and windows and a prearranged idea of the location of furniture has resulted in not a foot of space being lost in these rooms.

The clothes closet is behind the door leading from the corridor to the room, the one door closing the other should it be open. Each of these closets are equipped with a small brass strap latch and staple so that the nurse may padlock. Its depth is a little more than equal to the width of the bed which fits into the recess thus provided. Directly opposite so that the bed may be easily wheeled out to the balcony, is a four foot door, the top two-thirds of the surface of which is glazed, thus forming a window, the top third consisting of double glazed sliding sash opening either way for ventilation. The narrow side of this doorway leaves room for the steam radiator and the other and wider portion a place for the dresser. A chair and a table at either the foot or the side of the bed and a small painted steel waste basket completes the standard equipment. A wall bracket is located at the head of the bed and another at the left of the dresser. Each has a chain pull switch.

Beds are of the day-bed pattern but of a three-



Basement plan.



First floor plan.

foot width, of square steel tubing finished in furniture finish and mounted on four-inch rubber-tired wheels. The woodwork of the room is finished to match the furniture, a golden oak rubbed satin finish, and the walls are painted in flat finish washable paint, each floor being treated with a different color scheme.

The glazed doors leading from bedrooms to balconies are duplicated on the outside, thus providing the equivalent of a storm door or window. In summer these doors are latched back against the inner balcony walls out of the way and when winter comes all that has to be done is to unlatch and close them, thus doing away with the necessity of removal, storage and subsequent replacement of storm windows each year. This storm door ventilates in the same way and is an exact counterpart of the inner door from which it is separated by the width of the wall, in this way providing an intervening dead air space.

The superintendent's suite consists of hall, sitting room, bedroom, sun room, kitchenette and bath room and occupies the southeast corner of the main floor.

The sitting room is equipped with an electric fire place and the walls, ceilings and furnishings are tastefully decorated. The sun parlor has removable glazed sash replacable with screens for summer use.

The second and third floors are identical and are given over to bedrooms with a sitting room and kitchenette occupying the west center, toilet rooms at each end, and a small supervisor's suite in the southeast corner.

These uncommonly bright and attractive sitting rooms are twelve by eighteen feet and are furnished in rattan, upholstered in bright cretonnes with curtains to match. Each is equipped with writing facilities and adjacent is a complete kitchenette where a light meal may be prepared at a moment's notice.

The fourth floor is given over to maids and is identical with the second and third except that the rooms are designed to accommodate two beds and contain two cupboards.

Cooks and housekeepers, etc., occupy the larger corner rooms on this floor.

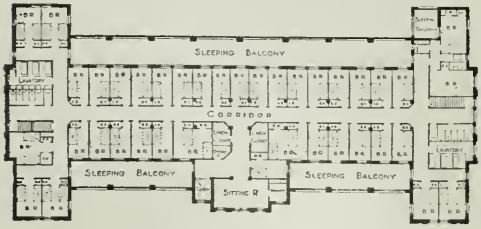
All rooms are numbered and each door has a small oxidized label holder affixed to receive the occupant's visiting card. On every floor a roomy telephone booth adjoining the sitting rooms with a small glass observation panel in the door.

Terrazzo-floored concrete staircases at each end of the building serve as fire escapes as well as means of everyday communication between floors in case of elevator repairs.

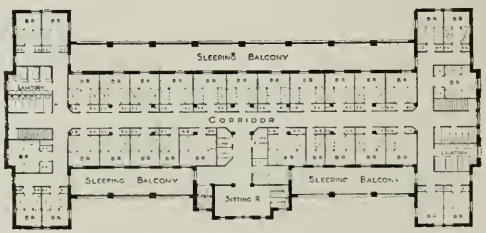
Situated at points on the main floor where nurses pass immediately before entering the hall on their way out are life-sized plate glass mirrors facing the turn in the corridor, enabling a final inspection before leaving, and in the bathrooms are built-in mirrors occupying the entire area lengthwise over each battery of wash basins.

Floors of Hard Maple

Floors of all bedrooms and corridors are finished in hard maple, reception room in oak, hall entrance, vestibules, bathrooms, toilets, kitchenettes, and staircases in terrazzo; and balconies in asphalt, whilst the walls in toilets, bathrooms, and



Second and third floor plans.



Fourth floor plan.

kitchenettes are finished in Keen's cement up to six feet and heavily enamelled. All terrazzoed floors have a six inch cove where they join the wall.

Electric current being cheaper in Winnipeg than in any other city on the American continent (500,000 horse power being the daily consumption, and the cost for cooking and heating one cent a kilowatt), electric cooking devices of every kind are freely supplied throughout the kitchenettes. Each of these kitchenettes has built-in cup-

A typical single room photographed from the balcony. At the head of the bed and behind the door is a large closet. The beds are of the day-bed type but are three feet wide; they have furniture finish and rubber wheels.

boards with sliding doors. The tops of these cupboards are covered in zinc and serve as tables for the accommodation of hot plates, toasters, etc., as well as for other purposes. The kitchenettes have outside light and are bright and attractive little rooms.

The four upper floors of the building are heated with steam, but the basement with the hot water resulting from the condensation of the steam above. The hot water after it has heated the basement flows by gravity back to the power plant located in another building connected by tunnel.

At the end of each corridor are rising bells operated from the office on the main floor for the purpose of calling the staff in the morning and a fire alarm system also focuses at this point as well as all door bells.

The site is an ideal one for hospital purposes and occupies twenty-five acres of ground in the extreme southeast corner of the city. It is bordered on two sides by the Red River (of the North) and on the other two sides by terminating streets, thus providing a quiet zone of natural formation.

The grounds provide almost the entire needs of the hospital in the way of vegetables, are surrounded by a double row of young maples, and are being beautified and made more park-like from time to time.

MORTALITY FROM TUBERCULOSIS

The Department of Commerce, through the Bureau of the Census, announces that nearly 100,000 deaths were due to tuberculosis in the death registration area of the United States in 1920, and if the rest of the United States has as many deaths from this cause in proportion to the population, the total number of deaths from tuberculosis in the entire United States for 1920 was about 122,000, while for 1919 the number is estimated as 132,000, or 10,000 more than for 1920.

The trend of the tuberculosis death rate is downward. In the registration area of the thirty-three states which show rates for more than one year, twenty-nine show their lowest rates for the year 1920. The tuberculosis death rate in the registration area in 1920 was 114.2 per 100,000 population against 125.6 per 100,000 population for the year 1919.

To permit better interstate comparisons for the year 1920, adjusted rates based on the standard million population have been calculated. The highest "adjusted" tuberculosis rate for 1920 is 215.7 per 100,000 population for the state of Colorado, and the lowest is 40.8 per 100,000 population for the adjoining state of Utah. The high rate for Colorado is evidence not of unhealthfulness of climate, but of the attractiveness of the Colorado climate to those afflicted with tuberculosis.

For the states in which at least ten per cent of the population was colored, adjusted rates have been calculated separately for the white and colored populations. In this group of states the highest adjusted tuberculosis rate for the white population is 137.6 per 100,000 for Kentucky and the highest adjusted rate for the colored population is 354.9 per 100,000 population for the same state. The lowest adjusted tuberculosis rate for the white population is 54.2 for Mississippi and the lowest for the colored population is 175.2 per 100,000 population for Florida.

TUBERCULOSIS CLINIC ESTABLISHED

A tuberculosis clinic for ex-service men was opened recently at the Veterans' Bureau, 23 West 43rd Street, New York City. The clinic has been established at the suggestion of the New York Chapter, Red Cross, which is constantly finding new cases of men who developed the disease while in the service, but who are unwilling to go to a sanatorium for treatment.

The Veterans' Bureau has also recently established in New York, a mental clinic where men who are not seriously enough affected to be sent to institutions can receive treatment. It is estimated that eighty per cent of the men coming to the medical social service department of the New York County Red Cross each year—or about 1,000—are mentally unbalanced and in need of such treatment as the new clinic affords.

RECENT HOSPITAL LEGISLATION

By DOROTHY KETCHAM, Chicago

From the vast volume of legislation enacted in the various states during their respective legislative sessions in 1921, Miss Ketcham has culled the laws relating to hospitals. Although all except a very few of the state law-making bodies were in session in 1921, no exceptionally important enactments bearing directly on hospitals were made. Undoubtedly of prime importance in reviewing hospital legislation of the past year is the passage by three states of bills requiring the licensing of maternity or lying-in hospitals. Idaho, Missouri and Texas have written such requirements into their laws. Several states by new or amended legislation have granted state aid for hospital purposes.

ALTHOUGH hospital legislation enacted during the year 1921 has not yet been published or made available for all the states, a brief summary of the more important laws is given in this article. The discussion is divided into three general parts: (1) those laws dealing with the licensing, inspection and regulation of hospitals; (2) those dealing with the incorporation, tax exemption and public aid of hospitals; and (3) those dealing with the organization and management of hospitals. Laws, such as those passed in Connecticut (c241), Idaho (c233), Iowa (c40), Missouri (SB98), Nevada (c23), Oklahoma (c4) and Texas (c9), relating to the reports of hospitals concerning the existence of ophthalmia neonatorum and the use of prophylactic solution in the eyes of the newborn have not been included. The arrangement of material will be by subject matter and state. Reference will be made only to the chapter or page of the laws of 1921, as indicated by the letters and numerals inclosed in parentheses.

Three states have required the licensing of maternity or lying-in institutions—Idaho (c57), Missouri (SB152), and Texas (c76). The license is to be obtained from the state board of health, the department of public welfare or the state board of charities and corrections, as the case may be. The institutions are subject to inspection and must make certain reports to the state board. The licenses are renewable annually in Texas and Missouri; in Idaho every two years. Maine (c86) transferred the licensing and supervision of maternity hospitals from the state board of charities and corrections to the state board of health. Every license of a maternity hospital is revocable at will by the authority granting it in New York (c555).

Inspection and Regulation

In Michigan the state board of pharmacy is to inspect during business hours all pharmacies, dispensaries, stores, or other places in which drugs, medicines, and poisons are compounded, dispensed or retailed. The board of commissioners for the general supervision of penal, pauper and reformatory institutions by (393) of the same state is to inspect annually every county infirmary, county jail, and every private incorporated institution for the care and maintenance of the aged and defective. Insanitary conditions are to be reported to the county, city or village clerk, giving the nature of the findings; if within a year the conditions are not remedied the institution may be condemned.

California (c60) has created a department of institutions with a director appointed by the governor. The department is vested with the powers and duties of the various state hospital boards. The Colorado board of charities by (c85) is to have the control, management and supervision of certain state institutions, the state hospital, penitentiary, etc. This board is to employ the physicians, nurses and attendants.

Michigan, (163), created a state welfare department within which there is the state hospital commission consisting of seven members, the legal successor to the corporate powers, duties and responsibilities of the several boards of control of the six state hospitals. The board has supervisory or visitorial powers over "every private hospital, institution, or other home in which persons mentally diseased are treated or kept in custody under contract of hire under the commitment of any court." In the same state by (401) all asylums and hospitals are to be constructed as nearly as practicable to the provisions of the act concerning health, safety, ventilation, etc., according to the plans and specifications approved by the state fire marshal as to safety, fire protection and prevention and by the state board of health as to sanitation, light and ventilation. Charitable organizations or institutions which solicit public donations or memberships in Michigan, by (205), are to file with the state board of corrections and charities a statement giving their name, location, purpose, etc. These organizations or institutions are to be licensed by the board.

Connecticut has by (c82) attempted to prevent the defrauding of general hospitals. In New Jersey (c153) any person who obtains food, lodging or other accommodation or service at any hospital with intent to defraud is declared to be a disorderly person. Prima facie proof of the intent to defraud is the refusal or neglect to pay for food or service on demand, the use of negotiable paper on which payment was refused, absconding without paying for service or surreptitiously removing or attempting to remove baggage. Massachusetts (c319) has established time limitations for actions of contract or tort against hospitals or sanatoriums; two years after the cause of action occurs in the case of alleged breach of contract or of tort is the limit; for libel the limit is one year.

Persons who are confined, detained or imprisoned in any state, county or city hospital for the insane or feeble-minded, or in any private or charitable institution where a person may be confined, detained, or imprisoned by order of a court are to be examined and, if infected, be treated for venereal diseases by the health authorities having jurisdiction, Colorado (c190).

The New York state commissioner of health is from time to time to examine and inspect the sanitary conditions of all state institutions; to report his findings and recommendations to the president of the board of managers or trustees in charge and to the fiscal supervisor of state charities (c510). The superintendent of an insane hospital with the approval of the state commission may enter into an arrangement with local authorities, municipal, county or others, under which the laboratory services of the hospital may be made available to such authorities, New York (c673).

The following corporation laws which relate to the organization or incorporation of profit making or charitable hospitals have been included: California (c134) amends the code concerning the changing of articles as to the location, purpose, etc.; Colorado (c79) amends a previous law concerning the acknowledgment and filing of certificates of incorporation; Michigan (84) enacted a general corporation law which clarifies the legislation there and makes special provisions for four types of corporations for the purpose of carrying on any lawful business. Montana (c56) outlines the procedure for amending the articles of incorporation. Oklahoma (c28) amends a previous act relating to the formation of private corporations for benevolent and charitable purposes. These corporations have the right to purchase, hold, improve and convey real estate for the purpose of their incorporation and to transact any and all business connected therewith.

In passing upon the tax exemptions, the courts have very generally held that statutory provisions will be construed strictly and that property for which exemption is claimed must be shown to be clearly within the provisions of the act. The term hospital may not appear in the section but an expression such as "religious, educational, charitable, scientific institutions" or its equivalent may be used.

Colorado (c200) exempts from general taxation "lots with buildings thereon if said buildings are used exclusively for charitable purposes." Connecticut (c109) amended the general tax law to exempt the buildings or portions of buildings and the land on which they stand exclusively occupied as infirmaries and "all property of any hospital society which is supported wholly or in part by state appropriations." Delaware (c9 sec8-4) exempts from the income tax law corporations organized for religious, charitable, scientific and educational purposes, no part of the net earnings of which inures to the benefit of any private stockholder. Montana (c14) exempts corporations or voluntary associations solely religious, charitable or educational from the inheritance tax law.

Indiana (c4 sec5) exempts every building used and set apart for educational, scientific or charitable purposes, the tract of land on which the building is situated, lands purchased with the bona fide intention of erecting buildings thereon not exceeding forty acres, the personal property of the institution, the endowment funds and the interest thereon. Michigan (297 sec9) exempts the personal property of benevolent, charitable, educational and scientific institutions incorporated under the laws of the state. New Jersey (c320) amends a previous exemption including buildings "actually and exclusively used" in the work of the association, the land whereon the same is situated "which may be necessary for the fair enjoyment thereof, and which is devoted to no other purpose and does not exceed five acres in extent," and the furniture and personal property, if devoted to the purposes above mentioned. The act does not apply to institutions conducted for profit but is extended to institutions supported in part by charges or fees, provided the entire income is used for "said charitable, benevolent, or religious purpose."

Public Aid for Hospitals

From one point of view an exemption from taxation is in reality a grant of public funds, a gift of so much money. Some of the states go even further than this and in addition to the exemption from taxation grant the institutions, under certain conditions, funds for the maintenance or

extension of the work. California (c861) gives every city and county or group of counties the power to establish and maintain a tuberculosis ward or hospital for the treatment of persons in the active stages of tuberculosis. State aid amounting to $3.00 a week for each person therein supported at public expense is granted if the ward or hospital conforms to the regulations of the state bureau of tuberculosis.

Idaho (c141) gives to the boards of county commissioners the power to provide for the care and maintenance of indigent sick or dependent poor, to erect and maintain hospitals and to levy a tax therefor.

Indiana amended a number of laws relating to the operation of public and private hospitals. Under some circumstances if the board of county commissioners of a county finds that it is not provided with adequate hospital facilities, the board may give aid in the construction, equipment and maintenance of a hospital building, not to exceed the sum already provided by such association. (C142) permits the common council of cities of the fourth and fifth classes to make the same appropriations. Cities of 70,000 to 84,000 inhabitants by (c156) may appropriate moneys to support and maintain hospitals not organized for profit and sufficient to enable such hospital to meet the needs of the community.

Iowa (c83) provides that the board of supervisors of any county, in which no county hospital has been established, may in its discretion establish one or more wards in any public or private hospital situated in the county for the use of the county under such regulations as may be agreed. In Kansas (c31) private charitable institutions which receive state aid are made subject to the same visitation, inspection and supervision by the state board of administration as are the public charitable institutions. The state board is to pass on their fitness annually and no institution operated for profit is to receive funds. By (c34) of the same state, on establishment of a city hospital in any city of the second class, the mayor and council or the mayor and commissioners may levy a tax annually in addition to the taxes prescribed to equip and maintain such hospital. (C156) applies the same provision to counties.

New Jersey (c81) amends a previous act which enables cities with no municipal hospitals to enter into contracts for the purpose of supporting, maintaining and caring for indigent patients in any regularly incorporated hospital located in such city.

In Ohio (p77) the board of county commissioners of any county may enter into an agreement with one or more corporations or associations, organized for charitable purposes, for the purpose of maintaining and operating a hospital in any county where such hospital has been established. This includes institutions organized for the care of the indigent sick and disabled but does not apply to those caring for pulmonary tuberculosis, nor to sectarian institutions.

Management of Public Hospitals

In order to establish or maintain a hospital, a city or county must be given specified power. This may be by special grant or general legislative act applying to all cities or cities of a group. In Nebraska all cities which have attained a population of 100,000 or more may erect, establish, maintain and regulate hospitals, (c116 subd. XVIII). California (c462-466) amends a previous act relating to cities of the sixth class whereby a hospital may be established by the board of trustees, after a petition has been presented to them requesting such establishment and has been submitted in election, and provided further that the city has no municipal hospital.

In Minnesota (c304) cities of the first class with a population of 50,000 or more through their governing bodies may issue bonds and use the proceeds to acquire a site, construct and equip a contagious disease hospital. The same state (c116 and c218) provides for the enlargement of county groups maintaining tuberculosis hospitals and for the division of expense. Illinois (322) altered slightly the previous laws permitting cities and villages to establish tuberculosis hospitals or sanatoriums. North Carolina (c178) provides for the maintenance of county tuberculosis hospitals from general county funds, amending a previous law. In Texas (c42) cities and counties of over 10,000 may establish and maintain hospitals whenever by will or otherwise a fund of $50,000 has been left for such purpose. The same state (c18) has established a state tuberculosis sanatorium.

Vermont (119) amends a previous law so that the state may establish tuberculosis hospitals or wards for the treatment of tuberculosis patients in connection with any hospital, or may assist in the maintenance of such hospitals when in the opinion of the governor and the state board of health there is need. Indiana (c203) established the James Whitcomb Riley Hospital for the treatment of children. Any child under sixteen may be admitted or may be committed by judges of the circuit, criminal or juvenile court. Wisconsin (c305) established a memorial hospital for the care and treatment of discharged soldiers, sailors, nurses and marines.

A few of the detailed and special laws of only local interest have not been included in this summary.

A HABIT TRAINING SCHOOL FOR THE MENTALLY DETERIORATED

By CHARLES F. READ, M.D., State Alienist, Chicago

THE old saw that we are all creatures of habit is an observation well taken. Man does not come into the world with such instinctive behavior patterns as will enable him to fit into our present complicated social life. The only instinctive reactions he possesses are related to the very simplest expressions of a desire to preserve himself and the species. The baby must be taught the first principles of personal hygiene and the growing child learns the when, where and how of its daily existence only as a result of the mother's patient reiteration. Gradually a considerable number of these acquired reactions sink below the level of strictly conscious cerebration and become more or less automatic. The vegetative necessities of the organism are attended to at regular times and in certain places; the body is bathed, teeth cleansed, hair combed and brushed, clothing properly adjusted, meals taken at certain hours and eaten after the approved fashion of the community, and from one morning to another we carry out in these respects and many others a routine that has become so established as to be what we call second nature. And yet, from sad experience, we all know how easily upset this quite definite routine may be by the interference of unusual events. Even the habits most closely connected with purely vegetative functions easily suffer; constipation is all too easily acquired; and habits of bathing, cleansing the teeth, etc., are apt to suffer when the carrying out of the customary performance is made a little more difficult, that is, when the ordinary reaction pattern is not sufficient to the occasion. It is said that the Englishman in tropical countries shaves and bathes each day religiously, fearful lest the spirit of the jungle shall come to possess him. He is constantly aware of how easy it is to sink to the level of the savages about him if once he lets loose of the sheet anchor of these more fundamental habits.

Regressive Behavior

About one-third of all mental disorders belong to the class known as dementia praecox and occur in comparatively young individuals. Thus by a process of accumulation at least sixty per cent of all mental cases in custody belong to this group. We cannot enter here into the symptomatology of dementia praecox nor its abnormal psychology; suffice it to say that one of the most constant developments in the course of the disorder is a loss of interest in the things that normally give value to existence, the desire to appear well in the eyes of others, to provide for self and family, etc. As a result of this loss of contact with the world about them too many of these patients return to an infantile type of behavior. Basic habit patterns are allowed to fall into disuse; they become careless of their clothing and often tear it off; are untidy in their personal habits and eat in animal fashion.

In practically all institutions for the insane there are patients of this type who live upon a very low level. And the most astonishing feature of this apparent mental degradation is the fact that in the ordinary acceptance of the term, *there is no actual dementia present.* These patients retain their memories; the essential reaction patterns are still in existence but are not used. Time and again this is demonstrated by the fact that most deteriorated patients in the course of an infectious disease will come back to their old selves quite completely. The old interests return and the old habits of action are assumed almost as readily or even more quickly than they were put off.

Must Arouse Old Interest

Here then we have a definite problem in the care of a large group of the mentally disordered. We must in some measure restore to them their fundamental habits, their old ways of doing fundamental things so that they may again lead a community life, at least in an institution if not in the outside world. For a long time this extreme regression was accepted as rather a necessary evil. It was well known that spontaneous improvement took place at times in certain patients and that industry in general prompted habits of cleanliness, but little organized effort was made to produce this result upon a large scale as a part of a program for the betterment of this class of patients. Only within the last few years have the so-called "untidy wards" of dementia praecox cases been looked upon as an institutional reproach and the habit training of this group of regressives systematically undertaken.

Illinois has been one of the first states to establish a state-wide program of occupational therapy and as a part of this program at the Chicago State Hospital two wards for women, with a

capacity of about 35 each, are set aside for habit training. They are structurally unsuitable but are the best to be obtained. In like manner two larger wards of better construction are used for

Inmates of the "untidy wards" at the Illinois State Hospital at Kankakee have been moved to training cottages, such as the one shown above, where instruction in personal habits is given.

the male pupils. Upon one ward in each group are placed the more promising of the untidy praecox cases; very old cases and cases impulsively violent are excluded. The other ward serves as a promotional one for improved cases. To these wards are detailed intelligent attendants in charge of women of experience and sympathy.

The following program, while elastic, outlines briefly the essentials of this work. It is not sufficient to direct the ward assistants in a general way to see to it that their patients are properly bathed, dressed, specialled, etc. They must be given certain things to do at certain definite times and required to carry these things out to the letter with the understanding that this effort, while necessarily routine in character, actually represents the early development of a movement away from the old time hospital routine.

Daily Program in Habit Training Wards

6:00	Rising bell. Special, wash, brush teeth, comb hair, lace shoes, dress, air beds.
7:00- 7:30	Breakfast. Care of the wards for those who are able, make beds, sweep floors, etc.
9:00-10:00	Give water, special, care for nails, prepare for class.
10:00-11:00	Class work: kindergarten and other simple occupations.
11:30-11:45	Put up work and clean up.
11:45-12:00	Prepare for dinner, special, wash, etc.
12:00-12:30	Dinner.
12:30- 1:15	Care of teeth, special.
1:15- 2:30	Story telling and blackboard work.
2:30- 3:00	Give water, special, tidy up for exercises.
3:00- 4:30	Gym work on lawn if possible, if not in gymnasium. (Exercises should be simple and varied.) Walk.
4:30- 5:30	Special, rest and make tidy for supper.
5:30- 6:00	Supper.
6:00- 8:00	Music. Patients dance on ward: their minds to be kept as pleasantly occupied as possible.
8:00	All to toilet, wash teeth, brush hair, put to to bed with night gowns.
10:00-12:00-2:30-4:30	—Night specialling.

Here, as in the case of all "programs" everything depends upon the spirit with which a difficult task is approached. The chief nurse, the occupational aide in charge of occupational therapy upon the ward and the attendants must all be full of confidence that the object in view can be attained in spite of many discouragements. It is easy to write such a program but no one who has not seen it put into practice can realize the pertinacity required for carrying it out successfully; not only pertinacity, but much sympathy and a faith that finds its justification in its works.

Upon the other hand when we remember that we are not dealing with the feeble-minded, although these people behave in many ways like children, it can be more readily understood that this training in the individual case does not always progress in plodding fashion. These patients, as before stated, possess habit patterns that have not been destroyed but have merely fallen into disuse. It is therefore not unusual to see a canalization occur quite speedily and the untidy patient become rapidly, almost suddenly clean and interested in the work of the ward and in the special outlets for interest afforded by occupational therapy. These are the bright spots, the highlights in this work. Upon the other hand there are patients that would test the patience of Job. There are some who never improve or improve only to backslide. Not all recover or improve sufficiently to go home but considerable numbers do, as a result of training, attain to a higher level of living which makes it possible for them to lead a more comfortable, useful life, even though this life may remain institutional in character. Even from this latter viewpoint it can readily be seen that this work is a benefit to the state as well as to the patient, since whatever benefits the individual cannot but realize a public gain. The patient who formerly required in-

The dementia praecox patient in idleness.

cessant care and rendered no service ceases to become in time an institutional problem and may even develop into a positive asset as an industrial worker.

Such is the case of Pauline S. admitted at Chicago State Hospital July, 1920, in a very delapidated mental condition. Unclean in her habits and disordered in her speech and behavior, she entered the habit training class in September, 1920, at which time she had to be dressed by the attendant. She shortly became interested in class work, began to care for herself by combing her own hair, brushing her teeth, lacing her shoes, etc. She was advanced a grade in November and continued to improve rapidly, became a good worker in the occupational therapy class, was finally transferred to the industries in April, 1921, and paroled shortly after upon the recommendation of the medical staff.

The kindergarten work done in connection with habit training is essentially that in use everywhere for child-training and need not be detailed here. It is all arranged for the attainment of a definite end in a specific manner but of course here again we must realize that we are not dealing with children but with adults who are already in possession of unused cerebral pathways and that while at times they do not progress even as a child should do, again they go onward and upward by leaps and bounds.

Some Respond, Others Fail

At Kankakee 106 patients have passed through the habit training ward during the past year. Six were paroled home directly from the cottage, five more went home after being promoted to better wards. Twenty-two patients failed to show results and were finally demoted. Most of these

With habit training, pride in personal appearance is awakened.

A training class at the Kankakee State Hospital.

were women who had been in the institution for more than fifteen years. A few were younger cases who seemed to be incapable of improvement. *Eighty-four were advanced to better wards* where they still are subject to some supervision as to personal habits and where they are occupied during the day. The class building at Kankakee is a singularly pleasant little cottage, skillfully remodelled for this purpose. Unfortunately no intensive work has been carried on with the male patients as yet.

During this same period at Chicago State Hospital 196 patients were treated in the female habit training wards and eighty-seven were improved, ten going home. Good results were also obtained upon the male wards though not so striking because they were not so well organized. For obvious reasons it is more difficult to carry out this work with men than with women and its thorough development comes later.

Facilities for Group Training

Now a word as to the *ideal* arrangement for such work. There should be at least two wards for each sex, preferably cottages of bungalow construction, one for the beginners and another for those promoted. The day room should be large, light and airy with drinking fountain, wash bowl and mirror in the room so that all the patients may be benefitted by observing those who make use of these facilities. The dormitory should not be crowded. There should be no single rooms because all these patients are pretty much on the same level *and the endeavor to train them is a group proposition.* The toilets and bath room should be separate. In the toilet the seats should be separated by partitions to give some degree of privacy and thus foster a return of the proper conventions. Lavatories must be generously supplied. The clothes room should be large and adequately supplied not only with hooks for underwear and dresses but with hangers for outside

wraps, hats, etc. Much can be accomplished, especially with women, by appealing to their dormant desire to appear well. There must be a dining room upon the ward and the tables should be small, seating groups not larger than six each, preferably four. *There must be no crowding anywhere.* The paint should be attractive, even gay, in color, to which other decorations of one kind or another should be added such as wall paper panels, pictures, attractive hangings, rugs, plants, in fact everything that can be assembled to appeal in a wellbred manner to the patients' dormant love for color. There should be a phonograph in the day room with records which are fresh and often changed. There is nothing worse for a patient than the constant use of old, cracked records. Animal pets or canaries should be allowed them if possible.

The foregoing description applies to the male wards as well as the female wards. Both sexes should be supplied with non-institutional clothing in so far as possible. Strong dresses, drab colored dresses, blue jeans, etc., are to be avoided. The extra care given should do away with the necessity of these familiar institutional garments.

Occupational Work for Improved Cases

Upon the promotional wards there should be some more advanced occupation of a therapeutic character, such as wood sawing and sand papering for the men, doll making and simple forms of sewing or weaving, for the women. These occupations, together with the necessary housekeeping that is always to be done, accord a considerable variety of outlets for the patients' energies. And the point to be emphasized is the fact that these activities, together with the habit training, are such as to bring the patient again into contact with reality and to lead him out of his self-absorption back into a measure of normal life. Even though this may remain a more or less restricted life, to a great extent routine in character, much has been accomplished in that the patient has been rescued from the profound delapidation that is almost inevitable in a large percentage of this class of cases.

From the habit training ward patients advance to occupational therapy work.

In the gymnasium patients are led back to their old habits of play.

A case in point is that of Nora P. of the Chicago State Hospital who entered the kindergarten class in December, 1920, after a residence of some two years in the hospital. She was noisy and very destructive at this time, would sit on the floor and tear her clothing, was dressed and undressed by the attendants and was fed at the table since she would not use even a spoon. In a short time she stopped tearing her clothes and began to take some pride in her appearance. At this time she would spell some words upon the alphabet board but would do nothing else in class. In February she began doing a little work on the ward and to sew some in class. She improved steadily and after six months' training took care of herself and helped with the other patients besides doing any kind of work that was given her to do either in class or on the ward. She is now one of the neatest patients in the ward and a good worker. She has not recovered and very probably never will, but her behavior has improved tremendously and from a hospital liability she has been converted into something of an asset with a corresponding increase of personal comfort. The photographs indicate quite graphically this improvement as well as some of the activities that have led up to it.

No claims are made for the novelty of this idea. It is presented merely for the purpose of emphasizing the manner in which results are to be secured.

In a very well conducted, small hospital, it took a good superintendent three years to convince the board of managers that the training school for nurses should have graduating exercises for the pupils. It also took three years to convince this same board the advisability of having a training school committee.

A NEW COMMUNITY HOSPITAL ON THE WEST COAST

By H. P. WILSON, M.D., Chief of Staff, Murphy Memorial Hospital, Whittier, Cal.

ONE of the most complete small hospital units on the Pacific Coast is the new Murphy Memorial Hospital at Whittier, Cal., into the construction and equipment of which has gone some $275,000. Situated on an eminence above the town, Murphy Memorial can boast an inspiring location such as few hospitals possess, with its eastern windows looking out over the verdant San Gabriel valley and with a vista of Catalina Island and the sea toward the west.

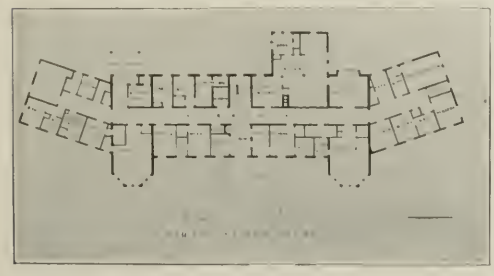
Whittier is a city of 10,000 inhabitants with a contributing ranch community of approximately the same number. It is only twelve miles by highway to Los Angeles and is located in the center of an active oil and citrus territory. Like many towns of its size, it has from its early days possessed inadequate facilities for the care of its sick. Structures built for homes or business purposes have been utilized for a measure of hospital service and in emergencies. In the face of such embarrassments, however, the surgeons had managed to accomplish a great deal of commendable work.

The city's good fortune in now possessing this excellent new hospital is directly due to the philanthropy of Col. Simon J. Murphy, Jr., son of the Simon J. Murphy who brought the first water-ditch to the little settlement of Whittier and who developed about it large oil holdings. The hospital is his son's memorial to this pioneer and promoter.

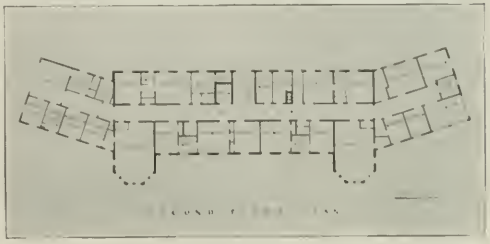
Eighteen months ago, Colonel Murphy, seeing need for a new hospital in the community, had a complete survey of hospital facilities made, which resulted in his decision to build a thoroughly modern institution. At that time the colonel, himself a chronic invalid, was suffering from an acute exacerbation of his malady which almost cost him his life. Forgetful of his own discomfort, however, he plunged into plans for the hospital and demanded that he be motored daily to the site so that he might personally supervise the work.

The Murphy Memorial Hospital at Whittier, Cal., with a capacity of 55 beds, has recently been opened.

The city donated the site, a park of seven acres, and appropriated $12,000 for the beautifying of the grounds by means of shrubbery and flowers. Churches, local organizations of all sorts and individuals contributed $15,000 toward the equipment of the institution, and William J. Milhous, a resident of Whittier, placed $25,000 in an en-



First floor plan.



Second floor plan.

dowment fund. Colonel Murphy put $200,000 into the structure. In deeding the building over to the city, Colonel Murphy's request was that the hospital be operated at all times as a Class A institution. Accordingly the city council, board of trustees and hospital staff plan to make the institution meet the requirements of the standardization program of the American College of Surgeons and have made provision to meet any deficit that may be incurred. A five mill levy on an assessed valuation of $5,000,000 will be used to meet any possible deficit and to swell the endowment fund.

Private rooms are cheerful and nicely furnished.

Murphy Memorial Hospital is a two-story and basement fireproof building of reinforced concrete with two wings for surgical and obstetrical work. The first floor of the hospital proper houses the administrative offices. The obstetric unit consists of a delivery room, nursery, two labor rooms, bath and sterilization room. The main kitchen, diet kitchen for the floor, the x-ray laboratory, treatment room and a number of private rooms and wards also occupy the first floor. On this floor, too, is the children's ward of six beds attractively furnished by a member of Colonel Murphy's family. The various rooms open on either side of a corridor which runs throughout the length of the main building and maternity wing.

The men's ward with its many windows open to the sun cannot be depressing.

The major operating room is distinctly modern in its equipment.

On the second floor is a complete operating unit with minor and major surgical operating rooms, sterilizing rooms, lockers, scrub-up and utility rooms, all furnished in a modern way. These have a north exposure. The chemical and pathological laboratory is on this floor, together with a diet kitchen, solarium, and a selection of private rooms and wards. These likewise open on a main corridor, so that every room in the building receives a measure of sunlight daily. Call and intercommunicating telephone systems with seven stations give splendid service. On this floor there are telephone plugs in every private room.

The obstetrical wing contains the delivery room (shown above) and every facility for handling maternity cases.

Each room and ward in the building has bath and lavatory facilities immediately connecting.

Where patients' diets are prepared.

Equipment has been largely purchased by churches and organizations of Whittier with the purpose of making it comparable in character to the construction itself. Beds, mattresses, chairs, light fixtures, operating tables, sterilizers, laboratory facilities, and x-ray equipment are of the best type obtainable.

The x-ray laboratory is completely equipped and a bedside portable unit has been purchased.

Murphy Hospital has its x-ray laboratory, which compares favorably in equipment with many larger institutions.

Trained technicians are in charge, their salaries paid by a laboratory fee. These men are equipping the laboratories to furnish complete pathological, chemical and x-ray services. The major operating room is furnished with the most modern apparatus.

The basement is equipped with laundry facilities sufficient to care for the flat work of the institution. A large washer, extractor and mangle do the laundry work successfully and transmit no sound or vibration even to the first floor. Several hotpoints are arranged along one side of the laundry room. Tubs are at the north end. A water softener and refrigerating plant are in the basement, along with steam generators and boilers for heating and sterilizing purposes.

Believing that the best way to obtain and keep an efficient corps of nurses is to give them proper living conditions, Colonel Murphy erected, under the direction of his own competent nurse, a home for nurses which is supplied with every convenience for their comfort and pleasure.

Accommodations are furnished as well for all the employees of the institution. At the rear of of the hospital is a large area laid with concrete

The main kitchen is on the first floor. Ice boxes are built in.

which furnishes a convenient parking place for automobiles.

The community of Whittier, especially its Chamber of Commerce, its council and hospital board, has been thoroughly posted on the necessities and advantages of a modern hospital. It is in sympathy with the standardization program and believes that through organization and good management the yearly deficit may be reduced to the minimum.

The dining room of the nurses' home was beautifully furnished by the wife and daughters of Col. Murphy.

GETTING SUITABLE HUMAN ELEMENTS FOR THE HOSPITAL LAUNDRY

By WALTER TRIMBLE, Chicago

To get and keep suitable human elements in the hospital laundry, Mr. Trimble suggests that managers should be willing: To pay reasonably high wages; to fix an eight-hour working day with a half holiday on Saturdays; to allow ten-minute rest periods each morning and afternoon; to provide a dining room in which employees may eat their lunches; to serve hot lunches at cost, or if this is impracticable, to serve hot tea or coffee; to maintain a small emergency hospital with a trained nurse or some department where first aid may be supplied; and to convince all employees that the object of personnel work is business efficiency, not charity, its sole purpose being to obtain efficiency and good will.

AS I have pointed out the necessity of employing none except suitable human elements in the hospital laundry, this brings up the important and difficult questions, "How shall we get them and how shall we keep them?" While a categorical answer is impossible, a few generalities may be of assistance both to the manager of the hospital and to the manager of the laundry department.

Until a few years ago, managers of laundries, including the heads of institutional plants, were, as a rule, satisfied to employ what may be called "the dregs of the labor market," the lowest grade of labor, morally, mentally and physically. Nearly every industry paid higher wages than the laundry, and at the same time had far better working conditions and general environment; hence, the laundry forces, consisting mostly of women, could only be recruited by workers whom other employers did not want.

It became manifest, with the introduction of expensive and complex laundry machinery, that it was necessary to get a better class of workers, and this resulted in some thought being given to scientific employment and the general improvement of the personnel. Simultaneously, the war made it necessary to increase wages greatly—in order to keep laundry workers at all.

Had to Pay Higher Wages

Scientific methods of employing workers, as all employers know, became an impossibility during the period of the war. Laundry managers took what labor they could get and they got out of it what they could; that was not very much, nor was it very satisfactory. Thus, an extremely bad habit was acquired, and it is not being thrown off as rapidly as it should.

But laundry managers learned one thing and that was, to pay higher wages and thus compete with employers in other lines of business. After interviewing scores of laundry operators I have found that in this field there is no tendency to drop back to pre-war wage schedules. These employers now realize that reasonably high wages are necessary, even in these times of much unemployment, if working forces of high-grade labor are to be secured and kept intact.

The amount of the stipend is, of course, the most important consideration, but there are things other than wages which have a direct bearing on the matter of building up an efficient personnel in the hospital laundry. When a person applying for a position is told that one is open, invariably the first question put to the prospective employer is: "What do you pay?"

Then, if the wage suits the applicant, the next question, as a rule, will be, "What are your hours, and is there a Saturday half-holiday?" Most laundry workers now want an eight-hour day, with the week closing at noon Saturday, and a lot of them—the best ones, I might add—are getting it. And they do not want to work overtime, either, at any wage.

Allow Shorter Working Hours

I talked this matter over with several hospital managers and I found they did not seem to realize that workers in the laundry department look on the matter of hours as an important thing. It was generally thought that because nurses have been used to long hours, with much overtime in emergencies, and as a rule have been quite patient in the matter, laundry workers, who are mostly women, would be contented with the same conditions. In other words, it was assumed that all women think alike.

But we must remember that here we have two distinct classes, with different training, different customs and different social traditions. The psychology of the trained nurse is not that of the worker in a hospital's laundry; what one will patiently put up with, as a necessary part of her chosen career, will drive the other away. It is

important that the hospital manager take this into consideration, realizing that the labor problems of his laundry manager differ in a great degree from the personnel problems of the hospital executive.

Value of Personnel Work

Twenty-five or thirty years ago, or perhaps back further than that, somebody coined a most unfortunate term, "welfare work," for a most praiseworthy pioneer effort to better the condition of workers. The independent and self-respecting American worker, as often has been shown, resents all efforts of "welfare" work because it sounds too much like charity. However, the work is needed, and therefore we must look around for an acceptable name for it,—one that at least will not be taken as an insult by its intended beneficiaries.

"Personnel work" is a term that appears to answer the purpose very well, and as it seems to be inoffensive to workers, I see no reason why it should not be adopted. At any rate, we need a standard name for this necessary work, so that all may become familiar with it,—a name that the employer may utter without fear of offending his employees.

The object of personnel work, it should be impressed on all workers, is not charity. They should be diplomatically informed that personnel work is done as a business proposition with the sole desire of getting the greatest possible efficiency, good will and cooperation. Let it be known to all that every time you, as head of the hospital, spend a dollar on personnel work, you expect the institution to get it back plus a reasonable amount of interest. Give the workers to understand that it will both please and benefit them, but that this is not its primary object, and assure all that it puts them under no obligation to you or to any other person.

Its Practical Applications

A great many operators of commercial laundries have found that it increases production and incidentally improves the quality of work to have a ten-minute rest period in the middle of the morning and a similar period in the middle of the afternoon. Such periods of relaxation do much to keep up the morale of women workers. It should be remembered that the period of relaxation is not lost time, but on the contrary it results in an appreciable increase in production and improvement in quality.

It is an excellent plan to provide a neat, clean, comfortable dining room in which workers may eat their lunches, so that they need not sit around the machinery and work-tables while eating. All plants cannot provide warm food for the workers at cost but all can provide hot tea and coffee at noon.

I wonder how many hospital managers have made provision to take care of their laundry workers in case of accident or sudden illness. Many commercial laundries maintain a small emergency hospital with a trained nurse in charge. There are not many accidents in a laundry, for laundering is not a hazardous occupation, but when an accident does occur it may be very distressing. Workers, especially women, are subject to sudden attacks of illness, which, with proper attention, may soon pass off, and for this reason the operators of commercial laundries find that a first-aid department, with a trained nurse in charge, does much to reduce the time lost from this cause. In almost any hospital the injured and ill persons could be given quick attention, with practically no expense involved, but I never have seen special provision made in a hospital laundry for such care.

The foregoing are a few of the things that make it possible to get suitable human elements in a hospital laundry, to keep them contented and to improve their morale. The world looks on the hospital as its greatest humanitarian institution, and I am sure that all will agree with me when I advocate humanitarianism for the hospital laundry.

BUSINESS METHODS AID HOSPITAL

Charing Cross Hospital, London, reports that the past year demonstrates the remarkable success of the system of voluntary payments. This hospital, however, occupies a unique position among the hospitals of Great Britain, in that, instead of being in debt, it has a balance of more than $18,000. This has been achieved by the introduction of business methods and organization. It was not long ago that Charing Cross was in the same situation as other hospitals, owing a large amount of money and running constantly further in debt. Then Mr. George Varity, a business man who had no experience in hospital management, was persuaded to undertake the management of the hospital affairs. He consented to try the experiment, and by the introduction of energetic and original business methods, as if by magic the hospital was transformed into a properous institution. This goes to show what can be done by the introduction of business methods into hospitals.

BOXING CARNIVAL FOR BRONX HOSPITAL

Fight fans of New York became contributors to the Bronx Hospital when proceeds of a monster boxing carnival at Madison Square Garden on November 29 went to benefit the hospital.

The star bout on the card was between Benny Leonard, lightweight champion of the world, and the welterweight champion of New Jersey, George Ward. "Tex" Rickard promoted the bouts.

Between the pictures of Benny Leonard on the cover of the official program and "Tex" Rickard of the Garden at the back were pictures and printed information regarding the hospital and the need of the $300,000 addition which is being built.

The MODERN HOSPITAL

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MENTAL DISEASE AND FACILITIES FOR TREATMENT

WHY is it that national interest, not to say hysteria, may be aroused in a campaign for the care and treatment of sufferers from physical diseases but none can be stimulated in behalf of the mental or nervous patient?

The country has been swept with a perfect hurricane of effort in behalf of the tuberculous. Large sums of money are raised each year through solicitation and sale of Christmas seals to support the work of treatment and prevention in the field of tuberculosis. Sanatoriums in large numbers have been erected, on both the state and county support plan. Scores of cities have well organized dispensary, out-patient and nursing service, devoted to tuberculous patients and the suppression of this disease. So with other physical diseases, whose ravages we are wont to portray in terms of dollars and cents.

But what about mental disease?

Horatio M. Pollock, statistician of the New York state hospital commission, states that the "burden of mental disease is each year becoming heavier." State hospitals are cruelly overcrowded in every state and it seems that most of them have given up as hopeless the task of furnishing adequate, decent room to these sufferers.

Mr. Pollock says, "A fairly complete census shows that the number of patients with mental disease under treatment in institutions increased from 74,028 in 1890 to 432,680 in 1920. The rate per hundred thousand of population increased from 118.2 to 220.1. Careful estimates based on statistics of the New York state hospital commission indicate that approximately one out of twenty-five persons becomes insane at some period of life."

He estimates the cost of these patients and the economic losses through their helplessness at $200,000,000 a year.

It must be kept fresh in mind that these figures relate only to that disease which is commonly known as insanity. Feeble-mindedness, epilepsy and psychopathic states must be estimated separately but at no less figures than those given for insanity.

Against this deluge of mental disease little opposition is offered. State hospitals that pretend to be more than mere places of detention are rare. Research into causes and preventive methods is limited to a few psychopathic institutes, ill supported by their states. Local dispensary or out-patient service, either under the auspices of a state hospital or of a mental hygiene society, is found in only a few places. The public is densely ignorant of the meaning of mental health or of the principles that underlie it.

No less should be done in behalf of the physical sufferer or to stamp out physical disease than is now done, but certainly the proportions of mental disease and their drain upon our economic and social resources suggest radical measures to arouse and enlighten a complacent public.

CARE OF SICK NOT HOSPITAL'S SOLE PURPOSE

EVERY now and again, at hospital conventions and elsewhere, one hears it said that the care and treatment of the sick is the sole purpose for which hospitals exist. Is this an accurate and comprehensive definition of a hospital's purpose?

THE MODERN HOSPITAL does not believe that it is. The care and treatment of the sick, broadly conceived, involves a number of important factors, all of which must be made a part of the aim and object of every hospital that is living up to the full measure of its possibilities. It goes without saying of course that the sick who enter hospitals should be safely housed, occupy comfortable beds and receive appetizing and nourishing food. The specific and compelling reasons, however, why the sick resort to hospitals is that they may be treated by well informed physicians and

skillful surgeons, that they may have the benefit of such diagnostic facilities as can be had only through thoroughly equipped laboratories, manned by well trained scientists and technicians, and that they may have skillful nursing service.

But where are these doctors and surgeons, scientists, technicians and nurses to gain their training and experience? Some of it in the medical and nursing schools; mainly, however, through the practical work which they do in the hospitals. So greatly indeed do these workers depend on the practical education they receive in the hospital, for their skill in the care and treatment of the sick, that this education, far from being a by-product, takes its place beside the actual care and treatment of the patient, as one of the hospital's principal functions.

And what of the research work which so many hospitals have carried on so successfully, and which has had such a marked effect in improving the treatment of patients everywhere?

While it is conceded, then, that the care and treatment of the sick is the first concern of every hospital worthy of the name, it is not, as is so frequently declared, its sole concern. Were the latter true, and were hospitals to relegate their educational, research and preventive work to the class of by-products and emphasize them accordingly, it would be a sad situation for the sick.

REGIONAL HOSPITAL ASSOCIATIONS

At a recent meeting held at the Medical Library in Boston to consider the advisability of organizing a New England Hospital Association, a plan of regional organization was presented by Dr. A. R. Warner, executive secretary of the American Hospital Association, which in our judgment is worthy of serious consideration and early adoption by certain sections of the hospital field. The fact that the plan was not at this time adopted by the hospitals in New England, where it is felt that state lines are not so sharply drawn as elsewhere in the United States, does not in itself argue against the adoption of the plan in other sections of this country.

During the past seven years seventeen or eighteen state hospital associations have been formed and several other state groups are now seriously considering the question of organizing associations, and applying for membership as geographical sections of the American Hospital Association. There are some states, however, that would like to organize state associations, but they feel that there are not enough hospitals within their confines to make possible a strong association with well-attended annual or semi-annual meetings. To two or more contiguous states that find themselves in this position Dr. Warner's plan offers a way out. He proposes that the hospitals of adjacent states, all or the majority of which feel that the organization of state hospital associations as separate and unassociated bodies is for the present at least out of the question, shall nevertheless organize as separate state associations, and at the same time shall call into being a council, made up of two or three delegates from each of the state associations, this council to be the correlating and controlling body of the state associations in the group, and authorized to transact such business for each and all of the states as should be delegated to it. A joint annual meeting of the state associations in the group would be held under the auspices of one of the state associations, officers of which would prepare the program and preside over the general sessions. At the annual meetings there would be separate meetings of each of the state associations under their own officers to discuss problems of distinctly state interest and scope, just as at the annual conferences of the American Hospital Association there are separate meetings of various sections where problems of peculiar interest to these sections are discussed. General sessions would also be held for the consideration of subjects of common interest and bearing.

As Dr. Warner points out, the idea of sectional hospital meetings is by no means new; in fact the Southern Hospital Association is now in existence. What is new in the idea here proposed is the joint organization of several state associations, all of which are geographical sections of the American Hospital Association, a relationship which secures greater stability and more sustained interest.

We commend the plan to our readers for consideration and believe that there are several groups of states that would profit by its adoption.

LEAVING A TRAIL OF GOOD WILL

A NEW standard of community giving for hospital purposes, but one widely attainable if wisely approached, was recently established by Elliot Hospital, located at Keene, N. H. This hospital went to the public for $225,000 for a new building and received $273,465 from 4,962 subscribers, an oversubscription of twenty-one and one-half per cent. The campaign in which this money was raised is described in detail on page 122 of this issue, and carries an exceedingly important lesson for all who contemplate raising funds for new or enlarged hospital construction. This lesson is that generous and wholehearted giving must be based on a warm interest and this interest must be aroused by telling the public in terms that it can easily understand what the

hospital is and what it does. In a word, the public must first be educated before it is asked to sign a subscription blank.

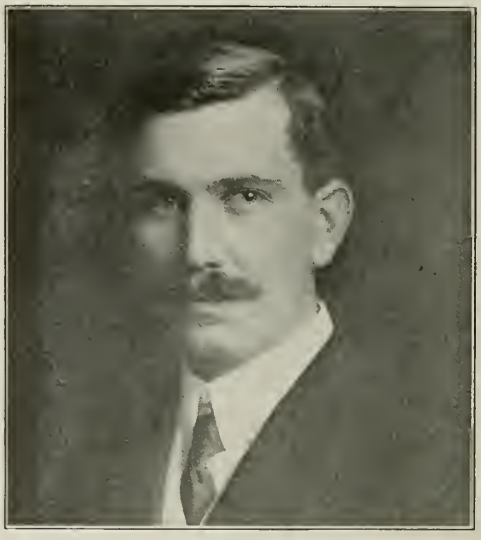
Doubtless much of the preliminary educational work of the Keene campaign could have been dispensed with had the Keene Hospital been in the habit of telling the public year in and year out what it was doing, but like most other hospitals it apparently had not been in the habit of conducting a year round publicity program. Consequently it resorted to the next best plan and conducted an intensive campaign under the guidance of trained and experienced organizers. "It was realized," says Mr. Robert T. Kingsbury, chairman of the executive committee of Elliot Hospital, "that the success of the movement depended upon the thorough education of the public in what the existing hospital had done and was doing, in the growing need of Keene and the county for more adequate hospital service, and in the necessity of building a larger new hospital if the health needs of the county were to be met with reasonably adequate facilities." In this educational process resort was had to the newspapers, circulars, maps, letters, the Chamber of Commerce, the women's club and other organizations, and to a staff of public speakers who addressed fraternal organizations and spoke at motion picture theaters and other places of public assembly, all in an effort to educate the public about the hospital and its needs.

Once the public was thoroughly aroused, coercive measures to obtain subscriptions were unnecessary; browbeating was conspicuous by its absence. The movement was fundamentally an appeal to reason and the response to the appeal was generous.

But while the education of the public is fundamental in the success of any financial campaign, perhaps the real secret is to be found in the concluding words of Mr. Kingsbury: "From the very first days of planning we went forward with the determination that the immediate raising of a fund was not our ultimate goal. That we should blaze and leave behind us a trail of good will, always leading to a vision of closer community spirit and civic advancement, seemed equally important. And now, three months after our success, the raising of the fund almost pales before the greater, intangible brotherhood of Cheshire County, of a greater good will between city and towns than has ever existed."

The end of all political struggle is to establish morality as the basis of all legislation. Morality is the object of government. We want a state of things in which crime will not pay; a state of things which allows every man the largest liberty compatible with the liberty of every other man.—Emerson.

TOURO SUPERINTENDENT PASSES AWAY



Arthur Bramble Tipping.

ARTHUR BRAMBLE TIPPING, for twelve years superintendent of Touro Infirmary of New Orleans, died of pneumonia on December 30 at his home in Bay St. Louis, Miss. He was stricken a few days after his return from the North and East, where he had visited a number of hospitals to gather data in connection with plans for an additional building to be erected at Touro.

Mr. Tipping was born at Portsmouth, England, on June 30, 1879. He volunteered for service in the Boer War and spent six years in the Quartermaster's Corps of the British Army in South Africa. He came to America in 1906 and engaged as a chartered accountant in the employ of an English firm in Canada. From Canada he went to Chicago to help inaugurate a new system in Michael Reese Hospital. He became the assistant superintendent of that hospital in 1907-08 and thence went in October, 1908, to New Orleans to take charge of the Touro Infirmary. He quickly won the confidence and friendship of the administration and medical staff of this institution, and, with characteristic energy began the improvements and additions which have greatly expanded the efficiency and scope of Touro's work. Recently it was decided that a new building was necessary to care for the growing demands of Touro Infirmary. Definite plans awaited his report on the new suggestions and ideas that he had gathered in his visit to the hospitals of Chicago, Detroit, and other cities.

Mr. Tipping is survived by his wife, formerly Miss Katherine V. Dolan of Philadelphia, who was superintendent of nurses at the Touro Infirmary, and two sons.

The superintendent was known to be a man of attainment in his chosen vocation and was a recognized authority in matters related to hospital administration. He took a keen interest in all philanthropic enterprises, whether local or national. He participated in the hospital reforms instituted by the American College of Surgeons and the American Hospital Association, of which he was formerly a vice-president. He was recognized throughout the South as a progressive administrator of rare ability.

A PLAN OF ORGANIZATION FOR THE NEW ENGLAND HOSPITAL ASSOCIATIONS*

By A. R. WARNER, M.D., Executive Secretary, American Hospital Association, Chicago

HOSPITAL associations like other social organizations are controlled and moulded by the fact that they are made up of human elements. It is foolish to expect anything different. This makes it wise at this time to review the principles which have generally produced successful social organizations and on the other hand to note the fundamental conditions which lead to failure.

The principles which are always found underlying and guiding all permanent and useful organizations are clearly defined.

(1) It is required that there be strictly common basic viewpoints and interests in the emphasized activities and no real conflicts in any activity of the organization. every executive secretary quickly learns that this principle absolutely controls and directs the successful activities of any association.

(2) It is also required that the organization fill a definite need not within the legitimate scope of any other organization and that it promptly develop positive usefulness. In these days of a multiplicity of associations and societies none—except perhaps the promoters thereof—joins an organization for the thrill of initiation or for the joy of getting his name on a new roll. The novelty is gone. Organization is now merely a way to do something better and faster than it would otherwise be done.

(3) This requires that the plan shall in advance convince all of the groups it aims to unite that the organization will properly represent and promote their views and their interests. Few indeed will join any organization to reform it; it must meet with their approval *first*. Practical results must also be apparent.

The proposal to create a New England Hospital Association should be considered in the light of these principles, especially the exact plan of the organization. Such an association under any plan of organization would undoubtedly meet the second requirement. It would fill a definite need and promptly develop usefulness—at least in as far as its influence would reach through membership or attendance. The general purpose would be the same as the American Hospital Association, but it would supplement and contribute to its work. There is a distinct and an added value from the supplementary and local aims of the organization.

It must be recognized that every hospital worker can not attend the conference of the American every year, however valuable these meetings may be. It must be recognized that those who attend the meetings of the American can receive added benefit from attending another hospital convention even in the same year, especially if this second convention shall discuss local and sectional problems.

But the simple plan of organization whereby a New England Hospital Association attempts to unite by voluntary membership the hospital workers of all the New England states into one association can never be successful. It is in direct variance with both the first and the third principles and the plan should be modified to meet them.

The facts are as follows: The working conditions of hospitals vary sharply in the several New England states through differences in laws and other factors. If this association were to attempt to discuss local hospital problems which the American Hospital Association has never discussed and can never discuss satisfactorily (and it must do this to develop the benefits of a state association), it must either take these up by states one at a time or resolve itself into state sections. The first alternative is objectionable because there must always be present a majority of persons not directly interested. The problems would not be common. The second alternative is weak because the sections could never have final authority to decide and to act.

In making these statements it is not assumed that these discussions shall always be merely a relation of conditions as they exist and laws as they have been passed but rather discussions to determine what the conditions shall be and what laws directly affecting hospital work shall be passed. In other words it is assumed that organized hospital interests shall take an active part in the formulation of legal and other hospital health programs of the future. These programs must necessarily be developed by states.

TO ACCOMPLISH the satisfactory working organization of the hospitals of the United States and Canada there is needed—

(a) Local (state or provincial) associations to deal directly with situations and factors caused by legislation or other local conditions.

(b) Live hospital conventions in various sections of the country each year to bring the benefits from general discussions to more persons than can attend the annual conference of the American Hospital Association.

(c) A plan to carry a state or provincial association through a year not made active by either interest or anxiety over pending legislation and to eliminate that attitude toward its conventions best described as the usual attitude toward "local talent."

(d) The organization of all these associations and meetings as integral parts and sectional meetings of, and actively supported by, the American Hospital Association.

Massachusetts Leads Numerically

The hospital field in the New England states from which all membership and support of the association must come is about proportional to these figures:

Maine	Has	60	hospitals and	5,169	hospital beds
New Hampshire	"	68	" "	4,683	" "
Vermont	"	38	" "	3,084	" "
Connecticut	"	88	" "	13,899	" "
Rhode Island	"	51	" "	6,643	" "
Totals of all except Massachusetts		305	" "	33,478	" "

Massachusetts has 392 hospitals and 44,573 hospital beds which is more than all the rest of New England together. It is, therefore, reasonable to presume that the Massachusetts members will always be in the majority

in the association. This seems really serious and at once to introduce factions more fundamental than the association; for a Vermonter before he joins this association will remain a Vermonter afterwards, quite unaccustomed to acting with and by the consent of Massachusetts.

A New England Hospital Association formed by unlimited and voluntary membership from all of the New England states would carry into its organization factions drawn on state lines and kept up by state legislation, state problems and state activities. It would have one of these factions forever in control of the association by right of vote and by power of greater support both financial and professional. It would make delegations from the other states subservient to the majority from the one state. If the history of New England teaches us anything, it should inform us that New England is the last place in the whole world where such a plan of organization would be practical or could long exist.

Idea of New England Council

We all have a high regard for the wisdom of the personnel of the Massachusetts hospitals but we can scarcely believe that its decisions and voting would always be entirely satisfactory to all the other states. If it is not, the dissatisfied minority will simply drop out of the association. This is all it can do. Eventually this will leave a New England Hospital Association in name and a Massachusetts Association in fact. It is better to recognize this now and draw the plan of organization so as to prevent it; it is possible by a modification of the plan to avoid all of these difficulties and still retain all the advantages its promoters have hoped to receive.

In our opinion the following plan will accomplish this:

Each New England state should form a state hospital association to become a separate association and as soon as fully organized become a separate geographical section of the American.

There should be formed a correlating and control body, known perhaps as the New England Hospital Council, formed by two or three delegates from each state association. This body would correlate and promote the organized hospital activities of all the New England states; would represent and transact such business for each and all of the associations as should be delegated to it. It should elect its own chairman.

A joint annual meeting of the associations of all the New England states should be held somewhere in New England under the auspices of one of the state associations. The officers of this association should prepare the program and preside over the general sessions. This meeting would be known as the annual convention of the New England Hospital Association.

The time and place of each annual convention and the selection of the association to assume responsibility therefor should be determined by the council. Any expense of the meeting could be assessed by the council on the associations in proportion to their membership.

At each annual convention there should be separate meetings of each association under its own officers to discuss satisfactorily the specific problems of each state as well as joint sessions for the discussion of topics of common interest and bearing.

This plan of organization would not only avoid all the difficulties of the other but give additional advantages. The principal object of the association would be assured a greater success. More people would be attracted to the annual convention especially from states other than Massachusetts.

It is the history of all state associations that marked growth in membership comes from interest or anxiety over proposed legislation. It is then that the advantages and increased power in organization are best appreciated. Each of the state associations will from time to time gain from this as a common New England Association would not. On the other hand many of these same people will fail to attend a state meetitng, thinking it unimportant when there are no active state issues. The larger meetings would provide for them the necessary interest and attraction. The general attitude toward the joint convention would be more like that toward the conferences of the American.

It is the history of state associations that membership falls away rapidly as the particular motive for joining is ended. But it is now clear that this is prevented and equalized by linking the membership in state associations with membership in the American. Gains are thereby held.

The state associations—other than Massachusetts—would be small but amply large enough to maintain an organization meriting recognition as a geographical section of the national association. The real disadvantage of a small state association—which is the correspondingly small annual meetings—is by this plan avoided. The joint conventions would always be live meetings, attractive and instructive, and would quickly become of more than local importance. On the other hand there would always be the state section meeting and organization to discuss and handle the local problems arising in each of the states.

Would Mean Live Annual Meeting

This plan offers to the states of other sections a way out of their difficulties. In practically every state there is a group of live active hospital people who realize that the organization of their small group can be as powerful in their state as the larger group of a larger state, but the picture of the small annual meeting has held them back.

This plan meets that difficulty and in addition brings to their section of the country a live general hospital convention which will go far in compensating those who can not get to the conference of the American.

These sectional joint state conventions would merit every possible aid from the American to make them all that hospital meetings can be. They would be most valuable aids in accomplishing a fundamental aim of the American—that of serving as a means and a medium in the widest dispensation of the information concerning hospital progress.

The idea of sectional hospital meetings is old but the idea of organizing them as joint meetings of several state associations is new and came to the writer first from the president of a small state association. To him it seemed to offer a solution of the difficulties of his association and to open the door upon a better day. It is his plan to organize his section of the country in this way and promptly. Beat him to it.

TO HONOR PASTEUR

In 1923 will be celebrated the Pasteur centenary. The celebration will take the form of an international exhibition of hygiene and bacteriology and will be held May 1-October 31, 1923, at Strasbourg where Pasteur began his research activities. The University and city of Strasbourg, the Pasteur Institute of Paris and the Pasteur family will have charge of the celebration. A monument to Pasteur will be unveiled during the exhibition.

HOSPITALS AND PUBLIC HEALTH IN URUGUAY

By ALEJANDRO F. SARACHAGA, M.D., Director of Del Hospital Pereira Rossell, Montevideo, Uruguay, S. A.

IN CONSIDERING the sanitary conditions of Uruguay, special attention should be given to the "Hospital Pereira Rossell," which is our newest, most modern, and most hygienic hospital. It comprises, first, a lying-in hospital, where the most up-to-date methods of obstetrics are used, which is in charge of Drs. Pouy Orfila and Turenne, both professors in the School of Medicine in Montevideo. Each patient is charged $1.59 of our money (national gold currency). The institution has 160 beds, it is supplied with steam heat, and all windows and doors are screened. There are isolation wards for infectious cases, special wards for those who come from outside with suspicious diseases, and every possible antiseptic precaution is observed. Every patient who enters the hospital is given the Wassermann test. The hospital has the following equipment; an x-ray and two other laboratories, a large amphitheater for practical work, up-to-date apparatus for the microphotographic projections, etc., and six operating rooms equipped with every surgical appliance for all lines of surgical work. During the year 1919, there were 2,447 patients and 1,359 births; 2,889 women came to the dispensary. One hundred and eighty-seven major operations were performed, the average mortality for the year being 1.75 per cent.

A view of Hospital Pereira Rossell, showing the boys' pavilion.

The Practice of Obstetrics

Patients come to the polyclinics which are held every morning. Generally at the end of the ninth month they are given notice, through a simple procedure, to come to the hospital. Between the seventh and the tenth day after childbirth the woman is discharged from the hospital. When a patient, who has no sign of pathological trouble, wants to be attended at her home, if the best hygienic conditions prevail in the home, she is given a card with the address of a midwife who lives nearby, and who will attend the case. When there is an urgent call from a patient, a midwife is either sent immediately by automobile from the hospital to attend the childbirth, or arrangements are made to bring the patient to the institution. This kind of outside work, extending into private homes, in connection with some of the work which is done by the services of the "Servicio de Protección Maternal" (Maternity Protection League), which is in the charge of Professor Turenne, is duly registered. The physician in charge, or his associates, watches the homes and to collect her salary the midwife has to give the hospital the whole clinic history of the case. The results have always been good, with no mortality from puerperal infections.

In addition to the lying-in hospital, is the Hospital for Children. This, which is under the charge of Dr. Merquie, professor in pediatrics, is the seat for the pediatric clinic of the faculty of medicine. The surgical work is active and many operations are performed under Dr. de Peña. The department for children will soon be enlarged, due to the generosity of Mr. Alejo Rossell y Rios, a philanthropist of Uruguay, who bequeathed for this purpose a sum which draws $5,000 interest per annum.

Very soon the "Hospital Pereira Rossell" will have a department of gynecology. It will be under Drs. Pouey, Bottaro, and Blanco Acevedo, professors of gynecology. The building, which was designed by the famous architect, Ebrard, has four pavilions, eight wards for 160 patients, ten surgical wards, a large place for polyclinics, laboratories, x-ray apparatus, rooms for doctors and students, steam heat, up-to-date lavatories, and sun parlors, from which can be seen a beautiful panorama of the city. The equipment will include thoroughly modern surgical appliances costing $500,000 for all lines of surgical work. We have for the service of the hospital a number of trained nurses educated especially for this kind of work in the school for nurses, which is conducted by Dr. Nery.

Most people who come to the hospital or dispensary are poor, and only a very few pay even a small amount. The food is abundant and wholesome, the rooms well furnished, and the linen clean. The institution has its own laundry, and a pharmacy well equipped for any kind of an emergency.

Public health service in the Republic is supported by three free entities: The National Public Assistance, the National Board of Health, and the Municipalities.

The National Public Assistance owes its existence to the fact that according to a law of November 7, 1910, "Everybody who is poor and has no means, has the right to free assistance at the expense of the state." The high officials of the organization are the general director, Dr. José Martirené, and a counsel of nine members. The annual expenditure is about four million pesos, which comes from rent taxes. With this expenditure fifteen institutions are regularly supported, and this is increased to twenty-two in time of war. Besides this, the x-ray institute conducted by Dr. Butler is supported. This institute has one-half a gram of radium and is equipped with all modern apparatus.

The duties of the National Public Assistance are: Assistance to the sick and insane; protection of old, forsaken, and helpless people, who have by law, a pension of $8.00 a month from the state; guardianship of forsaken children; assistance and protection to mothers and babies. A free laundry is also maintained to do the work of some institutions. There is a prophylactic institute for syphilis, with which several dispensaries are connected, and where everybody receives treatment, rich and poor alike. We are combating syphilis to the utmost. This campaign was undertaken at the senate by Dr. Alejandro Gallinal, and the treasury supplies all the departments, buying directly from abroad.

The department of first aid and domestic service is in charge of a head physician, Dr. Loriente, one physician inspector, twenty-seven physicians, and eighteen practitioners. There is one main center with branches all over the city.

The Asylum Dámase Larrañaga is an institution to protect and shelter children who are abandoned or deserted for some reason. The children are placed temporarily at an orphan asylum, and when they are in good condition each child is given to a nurse who receives $12 a month for its care. Inspectors frequently call to see the children or watch them at the dispensary. After a certain age, they are sent to an asylum where they are educated by graduate teachers. Many are later adopted by families, but are always under the care of the protective league of the state. Other children go to different institutions which are supported by the state for a full education.

Latin American nurses at the new Montevideo hospital.

National Committee of Health

The National Committee of Health is an independent entity having control of the sanitation all over the country. It is the high authority of public health. The nineteen departments or counties, into which the country is divided, each has a health department of its own, but all are under the National Committee on Health. Physicians are also under this department.

The "Lazareto de la Isle de Flores" (The Illes Asylum) is also under this committee. The Republic of Uruguay never refuses to any ship the entrance to her ports, and there is no quarantine.

One of the most important duties of the National Committee of Health is the control of venereal diseases. The antivenereal campaign among us is very well organized. Uruguay holds the first rank in the Latin-American countries, according to Dr. Emilio Ceni, in regard to the campaign against tuberculosis, alcoholism, and venereal diseases. In order to fight syphilis, a tax of one cent to the hectara (10,000 square metres) has been charged for all pasturing land, and the legislature has passed a bill for $30,000 a year to buy medicines. The results, according to the statistics for fifteen years, are good.

Little patients convalescing under a spreading shade tree. In the background may be seen a section of the boys' pavilion.

The National Committee of Health, of which Dr. Vidal y Fuentes is the president, is composed of seven physicians.

The department of hygiene depends on the municipality. The hygienic conditions of the city of Montevideo are very good; there is a large sewerage system, and the drinking water, coming from a place thirty-six miles from the capital, is of the best quality; consequently the mortality is very low. Exotic diseases, such as yellow fever, bubonic pest, etc., cannot be propagated. Small-pox is almost a curiosity, partly due to the fact that vaccination is compulsory.

Puericulture is a subject to which we are giving much attention. Through the efforts of the general director of the public aid, the legislature voted a protective law for infancy, which is practically similar to the French Rousell's law. It is, in essence, vigilance for the care of children under natural alimentation. The new department for this work will be in full action early next year under Dr. Bauzá. The methods will be based upon the other already experienced dispensaries of the "Asylum Dámase Larrañaga." In connection with the League of Tuberculosis there is an open air school for feeble children. It is a beautiful country-seat near Montevideo, and it has a great reputation all over the country for the good results which it has obtained. The private institutions, "Pro Matre," "Boune Garde," "Protection a la Joven," and "Talleres de Don Bosco," do a very useful work in taking care of children's health and education. We had this year the second convention of child health workers, presided over by the eminent pediatrist, Dr. Luis Morquio.

The two departments of school and military hygiene are in charge of the secretary of public instruction and the secretary of war, respectively.

The National Institute of Health, of which Dr. Berta

The solarium of the gynecological pavilion.

is president, is under the control of the Board of Medicine. It was organized in 1897 by José Sanarelli, distinguished Italian, who was the first president. Vaccine, and prophylactic and curative sera are prepared here. The legislature recently passed a bill for $300,000 to increase its equipment.

The school for nurses, organized and conducted by Dr. Carlos Nery, has a big hospital pavilion where the students receive technical and practical instruction.

The antituberculosis campaign, which has been carried on for many years by the Tuberculosis League of Uruguay, was started by the well known hygienist, Dr. Joaquin de Salterain. It is supported by the people and the government. There are many dispensaries all over the country, where the consumptive, both incipient and well-advanced cases, receive every care.

A strong campaign against cancer and hydatid cyst has been organized and is conducted by a committee of physicians, who hope to decrease the large mortality from these diseases. Committees have been organized to fight the alcoholic danger and on the initiative of Senator Narancio, prohibitory laws have been passed.

Several new buildings are planned. A large polyclinic hospital with 500 beds will be erected by the Public Assistance; a maritime hospital has been made possible through the generosity of Dr. Asejandro Gallinal, a philanthropist of Uruguay; and a "Colony for Convalescents" through a gift of $300,000 from Mr. Justavo Saint Bois.

THE RELATION OF THE PRIVATE PAVILION TO THE HOSPITAL WARD*

By E. H. LEWINSKI-CORWIN, Ph.D., Executive Secretary, New York Academy of Medicine, New York City

THROUGH private generosity, taxation and business investment, hospitals have multiplied till, at the present time, we have 32,000 hospital beds in New York City. This includes beds of all kinds, for acute as well as for chronic cases, in public as well as private hospitals, general and special, philanthropic as well as proprietary or commercial hospitals. On the basis of 6,000,000 population, we have one hospital bed for every 200 persons, which is generally considered as ample provision, particularly when the various studies made in the past indicate that not more than ten per cent of the sick go to hospitals.

How many sick people do we have in New York City all the time? This would seem a natural question to ask when the adequacy or inadequacy of hospital provisions is being considered. Unfortunately, there is no way of answering this question accurately except with reference to the several reportable diseases, as we do not possess complete morbidity data for the community. In recent years, however, numerous studies of sickness prevalence have been made by the means of house-to-house canvasses. Two years ago in connection with the study of dispensaries the Public Health Committee of the Academy of Medicine likewise had such a canvass made in selected districts of the Greater City. The results of these various studies in this and other American cities, seem to point to the fact that about two per cent of the population is ill all the time, and this illness is of a kind that requires medical attention. On this basis, there are in New York City 120,000 persons sick all the time; not all of them, of course, requiring hospital accommodation. With the 32,000 beds in New York City we can hospitalize one out of every four sick persons.

Distribution of Beds

How well these beds are distributed by services to meet the existing demands is very difficult to answer with any degree of accuracy, except in connection with conditions for which a statistical foundation exists. For example, the demand for tuberculosis bed accommodation can be figured with a fair degree of precision. If the "conquest" of the white plague continues at the rate of the last few years, we will have to scrap some of our tuberculosis beds along with the navy. To a certain extent, the need for hospitals for children can be gauged. Preventive medicine has focused its attention on the child and with the aid of the pediatricians has reduced not only the death rates but the actual number of children's deaths occurring in this city and it has presumably diminished morbidity. It, furthermore, places the emphasis on educating mothers in the care of their children through the out-patient department. These combined influences have reduced the demand for pediatric beds, in spite of the increase in population. The demand for maternity beds can likewise be approximately estimated. We know the total number of births in the city and if we go on the theory that every primipara should be in the hospital, we have a more or less definite basis for saying that the number of obstetrical beds in the city is insufficient, although the available supply is not fully utilized. For other types of conditions we have to grope more or less in the dark because there are no data on sickness experience by conditions. The waiting lists for various types of accommodation could to a certain extent serve the purpose if they were available and if they were free from repetitions of the same names.

As a possible index we analyzed the experience of the Henry Street settlement which was kindly placed at our disposal. It supplies nursing care to from 30,000 to 40,000 patients annually, and the percentage distribution its cases furnishes a certain guide to the problem; it is limited in value, however, because of the small number of surgical cases which would be included in a group of this kind. In spite of this, the figures form a basis for judging the extent to which hospital cases correspond to the incidence of disease among the general population, but unfortunately very few hospitals publish their medical statistics and those which publish them are not following a uniform procedure and, therefore, make valid comparisons practically impossible.

Full Use of Bed Capacity

There are, however, several additional elements which must be taken into consideration when the adequacy of hospital provisions is judged. One is that the prevailing more or less rigid differentiation of beds into particular services does not make possible the full utilization of the

*Extract from a summary of the report on the hospital situation in New York City, prepared for the Public Health Committee of the New York Academy of Medicine and presented at the annual meeting of the Academy on December 1, 1921.

bed capacity. Some services might be overflowing, while others are slack. Only fragmentary data could be secured to establish the extent of this phenomenon, because the hospitals do not keep statistics by services. Then there is the division of ward services into male and female; finally there is such a thing as seasonal variation in illness. We tried in this last connection to obtain information from the hospitals as to the number of patients and days of treatment by months for the last two or three years, but could get this only from a comparatively small number of institutions. The data, though incomplete, show certain tendencies; there is a slump in December prior to the Christmas holidays, in January the hospital and population usually increases; the same is true of September immediately after the summer months. There is no inverse correlation between the number of patients and the average number of days' stay, as might be expected. In this connection it is of interest to mention that the average stay per patient is smaller in the municipal than in private hospitals.

We must also remember that the sheer existence of beds alone does not connote ability to take care of patients. We should differentiate between the potential and effective hospital facilities. There are many hospitals which run to fifty per cent or sixty per cent of potential capacity, and this taxes them to the limit of their resources because of their insufficient medical, nursing and other personnel.

Out-of-Town Patients

Before considering any additional extension of our total hospital capacity in New York City, it is well to consider very seriously the ways of transmutting our vast potential resources into effective activity. This means larger outlays for maintenance, larger professional staffs and intelligent scrutiny into the way hospital work is being done.

There is another element to be considered in gauging adequacy of hospital provision, the out-of-town population seeking relief in New York hospitals. As this is a rather important matter, we took pains to obtain data on this subject from all of the hospitals of the city, and we offered the clerical services of our staff to go over the record books and ascertain how many of the patients in the medical, surgical, and other services came from out-of-town and what proportion of these were in the wards and in the private pavilion. Here again we could obtain information only from a limited number of institutions, because in many instances the hospitals do not endeavor to ascertain the domicile of the patient beyond a city address. In several instances, we were told that the out-of-town patient, prior to applying to the hospital, acquires some city residence and this address is the one usually given. In some instances the patients conceal the fact of their out-of-town residence. This is especially true of free cases. The segregation of the out-of-town patients by ward and private pavilions applies only to private institutions, as the municipal hospitals, including the contagious disease hospitals, have no private accommodations. Incidentally the hardship to those suffering from a contagious disease and compelled to go to a municipal hospital where no private facilities can be obtained may be mentioned here. On the basis of the available information, we figure that a little over five per cent of our hospital patients are non-residents, and on the basis of the very limited experience of but five hospitals, about thirty per cent of these are private patients and over seventy per cent are ward patients. The hospitals having the largest per cent of out-of-town patients are Broad Street and St. Vincent's—in both almost one-fourth of their patients come from outside the city. As said above, the total out-of-town population in our hospitals is only about five per cent; it, therefore, does not invalidate the thesis that the existing hospital facilities in New York City are numerically adequate, particularly in view of the fact that the utilization of capacity of almost all hospitals has been falling off within the last ten years. The question, however, may be raised with propriety, whether ward patients, and particularly those who apply for free services, should be accommodated at the cost of either private New York philanthropy or out of our tax proceeds. It is a different matter with the patients who are willing and able to pay for professional and hospital services.

In this connection I should like to introduce the problem of the relation of the private pavilion to the hospital ward. The modern tendency in medical organization of hospitals is toward continuous service and the concommitant limitation of hospital association to one institution, at least insofar as private hospitals go. This tendency limits the opportunities of the visiting physicians to do private hospital work, which is essential to their livelihood, and raises the question of the adequacy of the existing private room accommodations. Our study shows that in the general hospitals of New York City 8.1 per cent of all the beds are private room beds, and 9.2 per cent are semi-private. This is on the basis of all general hospitals including the municipal ones, and it seems to me that this basis alone should be considered when the matter is looked upon from the community point of view, because the same men who are associated with the private hospitals give their time and attention to patients in municipal hospitals. The proportion of private and semi-private beds in the special hospitals is considerably smaller yet, a rather surprising fact.

The proportion of private and semi-private rooms in the general hospitals varies from three-fourths of the bed capacity of some of the smaller institutions to but 15 or less per cent in the case of the largest and best private hospitals. If there be need of extending our hospital facilities in New York City, it is in the private pavilion. The private pavilion, however, should not be regarded as a source of revenue for the support of the hospital. Most hospitals look upon the private pavilion as a milch cow for the institution, and in quite a number of them it helps to roll up a surplus at the end of the year. In many institutions this surplus is very small, but in some it has been substantial for a number of years. One institution showed a surplus last year of almost $150,000. If the private room facilities were considerably extended and charges reduced to a point at which the private pavilion would be only self-supporting and not an earner for the hospital, the problem of providing hospital facilities for the large middle class would be solved to a considerable extent. It seems to me that not only the proletariat, but also the salariat, as it has been called, deserves social thought. Those cognizant with the situation realize what an important economic problem illness is to the people of moderate means, who, because of their standards of life, would not go to a ward and for whom the prevailing charges are much beyond their financial capacity. Hospitals which make considerable profit on the operation of the private pavilion ought, in fairness to the public, make it known that the rates charged include not only all the costs of operation of the service, interest on capital invested, depreciation on the building and other incidentals, but also profit applied toward the maintenance of free ward patients. The philanthropy of these hospitals should be qualified to that extent.

VITAL STATISTICS THAT HOSPITALS SHOULD COLLECT AND PUBLISH*

By NATHANIEL W. FAXON, M.D., Assistant Resident Physician, Massachusetts General Hospital, Boston

VITAL statistics is that portion of demography that applies the statistical method to the study of vital facts, such as birth, marriage, sickness and death. The statistical data of hospitals form that portion of general sickness and mortality statistics that we are interested in considering, and includes not only the vital facts relating to sickness and death but also other facts concerning patients in hospitals.

Hospital statistics fall naturally into three groups:

1. Statistics dealing with the admission and discharge of patients, age, sex, race, occupation, and similar facts; patient's days treatment, average days of treatment per patient, number of empty beds, and other data indispensable to the administration of the hospital.
2. Statistics dealing with the medical or surgical history of the patient, including diagnosis, operation, pathological findings and autopsy, and the facts concerning morbidity and mortality.
3. Financial statistics, which include a detailed account of the receipts and expenses of the various departments, the cost per patient per day, cost of food per capita, and other costs by which the efficiency of management may be determined.

Vital statistics relate only to the first two groups.

The preparation and study of hospital statistics has in the past shown the efficiency of methods of treatment, such as serum therapy and of operation in surgical conditions. It has also shown the seasonal prevalence of certain diseases and the increase or decrease of a given disease during a period of years.

Hospital Statistics Act as Controls

Hospital statistics serve to act as controls to crude vital statistics through their exact laboratory methods and autopsies. There is also great opportunity to add to vital statistics, through the study of the incidence of non-fatal disease. Both of these groups are of aid to public health administration.

Statistical study of hospital data is indispensable in establishing administrative programs for an institution.

The fields of service of hospital statistics are therefore:

1. The advancement of medical and surgical science.
2. The aiding of public health administration.
3. The assistance of hospital management.

To serve a useful purpose in these several fields hospital statistics and hospital reports must fulfill three distinct purposes or conditions:

1. They must be statistical or scientific and complete.
2. They must be arranged for development or interpretation.
3. There must be some measure of efficiency of service.

It is obvious that all hospitals cannot collect and arrange all their statistics in a similar manner. A hospital treating only tuberculous patients can find few lines of comparison with a general hospital, and a state infirmary treating only free patients may find its tables widely at variance with a hospital treating mainly pay patients. Even in extreme cases, however, certain common grounds for comparison may be found as in the statistics concerning individuals with a common disease and similarity of tables may be had by the use of a common nomenclature of disease. But for a general comparison hospitals must be grouped according to their size and the class of patients that they treat, into:

1. General hospitals treating both pay and free patients and affiliated with some medical school and designated usually as teaching hospitals.
2. Non-teaching hospitals.
3. Special hospitals as mental and psychopathic, tuberculous, and eye and ear.

A distinction must also be made between house or non-ambulatory cases and out-patient or ambulatory cases. In this paper consideration is made only of house cases in general teaching hospitals of about 500 beds, although the general principles laid down will be applicable to other hospitals and to out-patient departments.

Complete Tables for Conclusions

A general hospital then, should collect complete statistical data on each case, arrange these data so as to be readily accessible for use, and study them to determine the efficiency of treatment and management.

"Invaluable logical conclusions may be drawn from complete statistical tables but the conclusions drawn from incomplete tables are always fallacious."[1] The truth of this assertion is shown by the comparative death rates at the Johns Hopkins Hospital 1902-1911.[2] Two factors only are considered, mortality and color.

Total death rate	5.8
Death rate, white males	5.1
Death rate, colored males	12.6

From this table it can easily be seen that if only the total death rate was considered, an entirely erroneous conclusion might be drawn in regard to the death rate for colored males, which was over twice as much. This clearly shows the need of complete tables covering all factors.

One of the common defects of histories is that they leave many important questions unanswered. One of the remedies is a series of blank forms with spaces for the recording of answers to definite questions. Another method is that of an outline for the history taker to follow so that he may not overloook important points without being obliged to conform to a stipulated form. In both cases portions of the history are to be written with entire freedom from such rigid devices. The blank form is from the statistician's viewpoint more desirable, while the other appeals more to the clinician. In either case the data collected should bear the signature of the person responsible for them.

However obtained, a complete case history should contain the following information. Some of it concerns vital statistics, some is of use only to the hospital administration. All is necessary.

1. Serial number.

*Read at the annual conference of the American Hospital Association, at West Baden, Ind., Sept. 12-16, 1921.

1. A. S. Percival, M.A., How to Read Statistics, British Med. Journal 1919, p. 540.
2. F. L. Hoffman, LL.D., The Statistical Experience Data of the Johns Hopkins Hospital, Baltimore 1892-1911.

2. Date of admission.
3. Service and ward to which admitted.
4. Name.
5. Residence, to determine the geographical area served by the hospital.
6. Sex.
7. Age.
8. Color.
9. Nationality, as determined by mother tongue.
10. Social status: single, married, widowed, divorced, separated.
11. Industry, as shoe factory, and occupation, as laster. Employers' name in some cases.
12. Whether or not a re-entry.
13. Body weight and stature.
14. Duration of stay in hospital.
15. Condition on admission: Acute, chronic, accident, for diagnosis, normal (pregnancy).
16. How discharged: Untreated, against advice, dead, otherwise discharged.
17. Medical history, including family and past history, present illness and physical examination, admission diagnosis, preliminary or pre-operative diagnosis with complications, final or post-operative diagnosis with complications, surgical operation with description by the operator, anesthesia, report, treatment and bedside notes at least twice a week, laboratory findings, pathological reports, autopsy report if performed, and special data on special diseases. Social case histories are becoming increasingly useful and will doubtless in time become a part of each individual's history. At least social service number should be entered.
18. Birthplace.
19. Birthplace of father and mother.
20. For purposes of notification, names and addresses of two relatives or friends.
21. Name and address of patient's physician.
22. Whether pay, part pay, or free, and rate charged.
23. Number in family and weekly wage.

For good and sufficient reasons, hospitals may add or subtract from this list, but for routine purposes this list may serve as a basis.

Experience has determined certain methods of assembling these data in record rooms.

1. Name catalogue, giving the data collected on the admission slip, together with the discharge data, and the proper reference for finding the record in the files.
2. Diagnosis catalogue of individual cases.
3. A compilation of statistics, kept on cards and arranged by years and subdivided to show sex, whether medical or surgical and division of each, and mortality.
4. Operation catalogue, filed under diagnosis and showing the operations performed.

Experience has also shown that such catalogues but imperfectly supply information. They readily answer what may be characterized as the obvious, but are able to assist but slightly in the study of the unknown. The solution is the use of perforated cards and mechanical tabulation. Professor Raymond Pearl of Johns Hopkins Hospital says "the first duty of a hospital statistical department should be the transferring of the basic routine facts from all case histories to punched cards for the purpose of indexing, assembling and tabulating."[1]

The most generally useful and flexible systems of mechanical tabulation are those known as the Hollerith system, from its inventor, Herman Hollerith, and a modification of this made by the Powers Accounting Company. By their use a large number of data are easily transferred to small punched cards and almost any conceivable grouping of data obtained through mechanical sorting and recording machines.

Sorting the Cases

For instance, if it is desired to determine the number of cases of appendicitis in Italian children under ten years of age, we have only to set the sorting machine, first for appendicitis and by running all the cards for the year through to get all the cases of appendicitis. A second setting for race and run will produce all the cases of Italians. A third setting for age and run will give the number of Italian children under ten years and from these cards we can obtain and study further the case histories. All sorting is done at the rate of 250 cards per minute, so that the whole procedure occupies but a mere fraction of the time that would be consumed in sorting similar data from a card catalogue, if indeed it could be sorted at all.

No card catalogue can forsee the questions of investigators, no hospital can afford the labor and expense of hand tabulation of these unexpected questions. Mechanical tabulation is the nearest means of providing for this yet devised. It is in successful operation at the Massachusetts General Hospital Industrial Clinic and at the Johns Hopkins Hospital. I do not advocate the abandoning of the card catalogues that have grown up as the result of years of experience; I do advocate the addition of this system to our present methods. Simplification will follow in the natural course of events. That which is unnecessary will be discarded.

One of the immediate results of the use of this system would be the easy calculation of age group morbidity in hospital patients, a grouping advocated by statisticians, but opposed by hospitals because of expense and difficulty.

The data to be recorded on these cards will of course vary according to the ideas of the staff of the hospital compiling it, but in a general way and let us hope for the common good of hospital statistics, it should tabulate most of the data already set down as constituting the statistics that a hospital should collect. The Industrial Clinic at the M. G. H. has developed a card suitable to its peculiar needs and Professor Pearl has suggested one that is in use at the Johns Hopkins Hospital.

One of the important points in order that comparison may be made is the adoption by all hospitals of a common nomenclature of disease. Most hospitals now follow the International Classification; many have developed modifications of this classification which increase its value for use in cataloguing. Two of the most widely known are Bellevue Classification and the Classification adopted by the Boston Hospitals. This latter divides diseases into 41 sections according to well recognized groupings such as specific infectious diseases, diseases caused by animal parasites, special skin diseases, diseases of the circulatory system, etc., and under each group follows an alphabetical subdivision. Two numbers are given, the number of the section and the international classification number. For cataloguing purposes this gives sufficient accuracy and ease of manipulation. But for use on a tabulation system further subdivision is necessary. For instance, all skin diseases are listed as 10-145, making it impossible to select the cases of psoriasis unless a sub-code with distinctive number is used. The United States census bureau code attempts this, but is rather cumbersome.

1. "Modern Methods in Handling Hospital Statistics," Raymond Pearl, Statistician to the Johns Hopkins Hospital.

The imposing of any one hospital diagnosis code upon the other hospitals of the country is undesirable unless such code is voluntarily adopted because of excellence. Probably the ideal code will develop in the course of practice and be adopted through its merit; perhaps some committee may be appointed to study this situation and hasten the compiling of such a code. Until then the International code should be used as a basis in reporting statistics.

Unit System of Filing Histories

"The purpose of filing case histories is two-fold: first, to preserve them, and, second, to do it in such a way as to make them most readily accessible to anyone who may in the future want to consult them. There can be no question that the latter purpose will be best served by the so-called 'unit system' of case histories, in which the hospital's complete record about any one individual forms one separate and distinct volume."[2]

We have now considered the first two methods by which hospital statistics may serve a useful purpose in their several fields, namely, the primary data they should collect and the method of arranging it. There must still be some measure of efficiency.

A hospital may measure its efficiency in two ways: First, by comparison of its own results from year to year; and, second, by comparison with the results of other hospitals similarly situated and caring for similar classes of patients. To compare the results of hospitals having dissimilar factors must lead to misinterpretation.

Dr. E. A. Codman has stated in a very clear and concise manner the logical questions which any individual might ask, to determine the results of medical and surgical treatment.

What was the matter?

Did they find it out beforehand? That is, before operation?

Did the patient get entirely well? And stay well?

If not, why not?

Was it the fault of the physician or surgeon, the disease, or the patient?

What can be done to prevent similar failures in the future?

What was the matter and did they find it out beforehand are naturally answered by comparing the preliminary and final diagnoses. These data appear on all the case histories at the Massachusetts General Hospital, but have never been tabulated. A slight step was made in this direction, by the compilation and publication of the studies of surgical facilities, but no general table of such a comparison has ever been made. That such a table would be instructive is self-evident.

Did the patient get entirely well? We have come to realize in Boston, largely through Dr. Codman's teaching, that results must be extended to include the end result of the case, which is really the vital result from the standpoint of the patient. That the patient survived an operation or recovered through some medical treatment sufficiently to leave the hospital is of course worth knowing and recording, but it is of far more vital interest to know the condition of that patient one year, two years or even five or more years afterwards. Consequently additional data must be obtained and added to the case history, through a follow-up system.

At present at the Massachusetts General Hospital on all surgical cases, (expense has prevented the extension to include all cases), a letter is sent one year from the date of discharge, requesting that the patient report at the hospital for examination and advice, or if unable to do so that he write or have his physician write describing his condition since leaving the hospital. This examination or reply is entered on the patient's record. If no reply is received, another letter is sent to the physician who recommended the patient to the hospital. Further efforts are directed through postmasters, and by the aid of directories. The percentage of successful follow-up cases during the last year has been 52 per cent. In some groups of cases, through the interest of staff members, patients have been followed up to ten years and the results noted on their records. The results of this follow-up work have been published only by individual investigators for certain small groups of cases, but never as a part of hospital statistics, to which they truly belong. Thus only may a hospital truly estimate its medical and surgical efficiency.

Was it the fault of the physician or surgeon? If errors can be shown, staff as well as patients benefit, and incompetency is discovered. Honesty is the best policy for hospitals as well as for individuals.

Was it the fault of the disease? Certain diseases are recognized as at present incurable and in considering end results such diseases should be grouped and due allowance made.

Was it the fault of the patient? If a patient refuses the advice of his physician then he must accept the results, be they good or bad.

It is necessary, therefore, in order to measure the efficiency of a hospital, to add to the accepted routine data the findings of the follow-up system and to compile and study end results. Both card catalogue and tabulation systems are available for this.

Cooperation Necessary for Collection

The medical staff of a hospital is or should be interested in its vital statistics and the form and accuracy of the medical case histories rests almost entirely in its hands. The collection of a large part of the other vital statistics and the development of all statistics rests largely with the administrative department.

The publication of these data concerns the governing and administrative bodies. Successful collection and intelligent publication can be obtained only by a common interest and cooperation.

Consideration of the comparison of the results of one hospital with the results of others leads immediately to the study of the statistics that hospitals should publish.

The publication of hospital statistics brings us to the consideration of annual reports and other publications wherein hospitals present their statistics. The same field of service exists here and the same tests may be applied as were applied to the collection of statistics. Such publications should increase medical and surgical knowledge, aid public health administration and, through comparison, assist in hospital management. The statistics should be complete, arranged for interpretation, and have some measure of efficiency of service.

Experience and custom has in the case of some of the general hospitals developed a somewhat similar publication of statistics. This similarity is mainly superficial and comparison is only made after laborious rearrangement and adjustments. Statistics relating to vital facts only are to be considered.

Hospitals usually publish, generally in an annual report, some or all of the following tables:

1. A comparative statement showing the number of patients admitted, treated, and discharged, the condition at discharge or how discharged, average pa-

2. Pearl—"Modern Methods in Handling Hospital Statistics."

tients per day, (it should also state the average number of empty beds) the division of patients treated into pay, part pay and free, and the total days of treatment. This gives a general indication of the amount of work done by the hospital.

2. A table of residences of patients, which shows the geographical area served by the hospital.
3. A table of the birthplace of patient and patient's mother, intended to show the nationality of the patient, but which in our polyglot population fails lamentably.
4. In some cases a table of occupations, which is of course of slight interest to the student of occupational disease and of none to others and for this reason is often omitted.
5. A table of medical and surgical diseases in terms of the International Classification divided according to disease, sex, and discharge. The degree of completeness of this table varies widely.
6. A table of surgical operations. The method of compilation of this table varies greatly. It is often omitted.
7. Some hospitals have published a table showing the surgical fatalities with a critical discussion of each case, which is in a sense the first step toward the study of end results, but unnecessarily lengthy.

Common Basis for Collection

The number and arrangement of these tables varies in all reports. I have seen but three hospitals publishing reports containing similar tables, similarly arranged, and these only for three years. The similarity has now ceased. A large amount of local option would seem desirable, and hospitals should in a general way be allowed and encouraged to publish those statistics that best fulfill the demands of those interested. But for the promotion of medical and surgical knowledge, for the assistance of public health and as an aid to hospital management, the main fields of service for hospital statistics, it is desirable that certain tables be collected on a common basis, with a common nomenclature and form, and be published by all hospitals. To state dogmatically all the tables that should be published would develop a discussion and probably considerable difference of opinion. Certain tables might, however, seem so universally useful as to admit of acceptance by all.

1. The table showing the number of patients admitted, treated, and discharged with various other data is found in all large hospital reports that I have examined, but there is no uniformity in the arrangement of these facts. In its present form this material cannot be compared. Since such data is universally accepted as desirable, should it not be presented in a similar manner and by a common accepted form?
2. The table of medical and surgical diseases is the next most commonly published table and through the adoption of the International Classification or some modification is in most cases comparable for totals, but here again the similarity stops. Some hospitals further classify into medical and surgical, some by sex, some by admission, others by discharge. Again the need of a common form of report is shown in order that this mass of data may be utilized without prohibitive effort.

The need of cooperation on these lines produced in Boston the organization of a committee of the record librarians of the five largest hospitals to assist in hospital standardization by using similar methods in caring for clinical records. The results of this organization have been an improvement in the classification of disease, the attainment of a closer cooperation with the hospital staff, the bringing about of a more nearly similar annual report, the extension of membership to ten other hospitals, and a keener study of the whole problem of collecting and publishing statistics.

The National Tuberculosis Association has for the past three years been studying and perfecting a standard nomenclature and standard follow-up system which will be reported for adoption by all members of the association this year.

The need of common standards is clear; the appreciation of this need is shown by these two widely separated considerations of the subject. The exact method by which we may attain this standardization is, however, not so clear. Two methods present:

Consideration of National Committee

The first, following the lead of the National Tuberculosis Association, by the appointment of a committee representative of the whole country, to consider, compile and recommend, standard tables suited to the several groups of hospitals. Such a committee should consider what data could be collected in common by all hospitals, what arrangement should be made, and what should be published. All data collected should not be published. Statistics for statistics' sake are useless. Some useful purpose must be served before hospitals will finance the publication of statistics. Consideration of the various groups of hospitals should lead to the selection of a different standard of publication. Some data should be common to all and published by even the smallest hospitals. Larger hospitals should publish more complete tables and special hospitals their own special data, but all upon a common basis. What this data should be and what tables should be published should form the work for such a committee. The recommendations of the committee should then be referred to the hospitals through their executives for consultation with their staffs. As has been pointed out, hospital statistics concern both staff and administration. It is a subject needing the sympathetic and careful study of both the physician and superintendent. Neither group should seek to impose its ideas upon the other without consultation.

Consideration of District Committees

The second method would be the consideration of the same subject by geographical units, committees representing such units while covering the same ground and confronted by the same problems, might be influenced and guided by local conditions so as to produce a plan that would meet with more sympathetic reception. Since both staff and executives are represented to a large extent in the state medical societies of the American Medical Association, the subject of statistics and their publication might well be submitted to these societies for their consideration. Conversant with local conditions, dealing with a smaller and less complex situation, they might work out a system that would be more likely to be adopted by the hospitals of their area, than a more ambitious and comprehensive plan which ignores these local conditions. If such local systems should meet with adoption, comparison of the success of various plans could be made and larger grouping result through the adoption of the better plans and perhaps finally a common system adopted throughout the country.

Of these two plans, I am inclined toward the support of the first, as more likely to produce results.

NURSING AND THE HOSPITAL

Conducted by CAROLYN E. GRAY, R.N.,
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THE RELATION OF A SCHOOL OF NURSING TO A HOSPITAL

BY ISABEL W. LOWMAN, CLEVELAND, OHIO

MISS NUTTING has said that the relationship existing between training schools and the hospitals in which they have arisen is a most unusual form of relationship, and that nothing at all like it exists in connection with any other school of the present day—that through this relationship the training school for nurses becomes an institution established by the hospital with one large, main purpose, and what we might call one subsidiary purpose in mind. "The first purpose," she says, "is clear-cut and imperative. The nursing work of the hospital—its most important task, must be done; the training school, through its students, will do it. The primary function of all training schools is that of carrying on the regular nursing work of the hospital. The education of the nurse is the subsidiary, secondary purpose of the hospital in establishing a training school, and it follows, as a matter of course, that it can be carried out only in so far as it is compatible with the main purpose of nursing the patients through the school."

There we have the matter in a nutshell, and it remains for us to discover how this condition has arisen, and why, in spite of the attention and interest which the American public has ever bestowed in matters relating to education, so extraordinary an exception should exist in our midst. Why should so large a number of hospital schools of nursing remain practically untouched by the influences which mould and shape the character of all other technical and academic institutions, and assure them a steady, progressive development along the lines of our best pedagogical thought? Why are schools of nursing a thing apart from the standards of the world about them, eligible neither to public criticism nor direct public support? How is it that any system of education, no matter what its pretensions, can so cloister and immure itself as to lose that most precious of all benefits, the understanding, cooperation and support of the intelligent men and women whose constant interest in matters pertaining to education is one of the greatest sources of American pride? Alone of all schools, your schools of nursing receive no gifts, no endowments, no material recognition from society, which supports the hospitals where these schools are sequestered. Alone of all students, your claim for libraries, laboratories, classrooms, and instructors is a claim hardly tolerated, rather than met in a spirit of intelligence and justice. Alone of all students, you more than pay for all that you receive in the way of housing and table, plus educational opportunities, which you rarely receive in anything like just measure.

Practically all other forms of education in this country, whether supported by private funds or by public subsidy, give the greater part of the student's education without individual charge to that student, so much so that it is said that the tuition fees paid by young women in our best women's colleges amount to only about a third of the expense of the education which they receive in these institutions. The same thing may be said of our great government service schools, Annapolis and West Point, where our midshipmen and cadets receive not only a splendid education, but an adequate money allowance from the United States Government during their stay there. There is, of course, a difference here, because in their case there is an unwritten obligation on their part to serve the country along military and naval lines after graduation. However, I think we can justly say that student nurses pay for far more than they receive while they are at school and that unless nurses break through the wall which separates their schools from a seeing and understanding public, they will, in the public estimation, at least, be rated as graduates of apprenticeship schools where workers are prepared to exercise a trade rather than a profession. Either you will climb up and out of your separateness and apartness from all other American

A PLEA TO NURSES

"I implore you to look over and beyond all selfish aims and considerations; accept the care of the sick as your sacred obligation, and because of them and in their interest, press your claims for better schools not only with the unorganized public but with your state and national legislators. In a country where our founders proclaimed that our laws should make possible an equal chance for the pursuit of life, health and happiness, the obligation to see this pledge more fully filled rests in large part with your profession. You cannot have great nurses in these days without good schools and you must be insistent, in season and out of season, until you have made your claim clear to everyone—including those of your own number who do not make enough use of their collective strength and of their combined action."

institutions of instruction and learning, and insist upon the general adoption in your own schools of a minimum pedagogical requirement which will establish your interconnection with other schools, or you will continue to suffer the inequalities and mischances of an institution whose processes are hidden out of sight and are, therefore, untouched by the improved standards of the world without.

It is only fair at this point to say a word about the notable exceptions which have been made during the last few years in the affiliation of some seventeen schools of nursing with universities. As matters now stand, the generality of your schools constitute an anachronism in our midst, and in many instances, are almost anarchically at variance with the traditions of the educational system of our country. By accepting candidates in any of your schools who have not completed their four years of high school, you are encouraging, tacitly at least, disloyalty to the school system of our country, both public and parochial, and, at the same time are making yourselves ineligible automatically to a proper representation under our state universities. Your isolation exposes you to loss on every side. Therefore, we now have the anomaly of a federal and state government yearly making laws whose execution depends upon the cooperation of thousands of women in whose education public subsidy yet plays no conscious part. One of the great public utilities—for such nursing has come to be—has no generally recognized place under our state universities such as that given to other branches of education.

Hospital Movement Has Uneven Expansion

The expansion of the hospital movement in this country has been on a par with the expansion of all other forms of human enterprise. It has been subject to an unevenness in development which has had a very sensitive register in the treatment of student nurses. The same defect of relationship of the training school to the hospital whose dangers to the student in one community may be offset by the liberal understanding and attitude of some member or members on the hospital board of administration, may in other communities render it possible for a hospital to take three years of hard work from a young woman and give her nothing in return except her living expenses and the opportunity to do this work. Until you succeed in remedying in some generally recognized and fundamental way the defect inherent in this relationship, you will make such slow progress that a rapidly moving world about you may supplant your whole system by something which, superficially speaking, may seem more in consonance with its needs. Nevertheless, one who studies your affairs from the outside comes to the conclusion that the bias and tradition of the nursing profession is the result of so many centuries of self-abnegation and acquiescence that it will be exceedingly difficult to get anything like a full recognition of your needs from the hospitals for some time to come. The relationship between hospital and school is somewhat like the old-fashioned relationship—and not so old-fashioned at that—between man and wife, where no well-defined economic rights accrue to the woman, even when she is a working partner in the efforts which found a fortune.

In a way, you yourselves as a group are the originators of this scheme of things for, in the beginning, centuries ago, you nurses and your sick *were* the hospital. It was you who called in both priest and physician. In those days you were doing your own work and it mattered little to you whether you baked or scrubbed or gave bedside care, provided you increased your capacity for taking care of a constantly growing number of the sick and suffering. Your ideas in those days were centered upon works of religion and mercy which aimed at nothing further in the care of the sick body than the kind of skill which practice gave you and which the compassion which lies at the source of all true religion no doubt made deft and tender.

But in those days when your minds were exclusively fixed upon a kingdom not made with hands, upon a beatific land toward which your weary feet were tending in search of eternal rest and a reward for your labors, it is not strange that you should have exploited yourselves extraordinarily, that long days and long nights should have been your self-imposed burden and that you should have counted no labor and no bodily hardship too difficult in the interest of mankind and your own personal salvation. Other communal societies, impelled by different motives, have acted along similar lines in our more modern days. Toward the middle of the last century a very distinguished group of poets, idealists and philosophers met in our New England States to associate themselves in an enterprise called The Brook Farm Experiment. No labor was to be called by them common or unclean. They felt that much of the unhappiness of modern society comes from sharply defined differences of occupation of its members. Therefore, when they founded their association, Emerson, I believe, followed the plow when he was not teaching philosophy, and the mother of a very dear and well-known friend of mine did the ironing and taught Greek.

You, however, had as nursing orders, I imagine, no conscious purpose of this kind when you varied your labors according to the needs of your institutions. Your idea was to increase the size of your institution so that you might have more patients. And, therefore, you yourselves, are perhaps the unconscious authors of your own present predicament, and it is small wonder that in a few decades you have not succeeded in relieving your schools of the pressure from these institutions for their practical, immediate needs for expansion.

Now, how and when did the idea arise concerning these early nursing groups other than those which originally animated them? Historically, we all of us know the different steps which have gradually led up to our day. But we have a way of associating our history with the bookcase and our practice with the immediate pressure that each day puts upon us. We fail, therefore, often, to interpret one in the light of the other, and consequently lose valuable aid.

When you were nursing orders, when you were doing your own work and were expanding materially and were increasing your temporal possessions in order to be able to do more good for your religion and your fellow-man, you were, at the same time, maintaining an institution which helped to make possible the advances of medicine. At least it brought the sick together in large numbers and made it possible for medical men to observe and care for them. And if this is so, must we not believe that in a fine and gradual sense it influenced the development of nursing and gave it, no matter how faintly, its orientation toward medicine? This, of course, may have been too slight a trend to be noticeable and certainly it was not sufficient to awaken an awareness of the fact or even a consciousness in a group of women whose whole lives were devoted to self-suppression and to salvation through self-sacrifice and renunciation; but who can tell how long a tiny seed may lie dormant and yet grow and bloom and propagate itself with rich harvests in far distant time? The tiny seeds, buried for thousands of years in the tombs of the Pyramids of Egypt, are said to re-

spond to the quickening influences of soil and light. So here, if we may find our reasoning true, we have the nursing orders establishing on one hand a bias of self-exploitation and self-sacrifice, and on the other hand, building up a tradition of service, faithfulness and obligation to alleviate the sufferings of mankind which finds nothing finer for many long centuries to rival its efforts. We also see that they were principals in this movement of mercy and religion and that the institutions which their hard labor maintained helped to foster and cherish medicine and to prepare for nurses of a later day their part and lot in this science.

We also know that among these nurses were women of great ideals, of noble birth and traditions, and that lofty impulses animated and sustained them, even though they had, as yet, caught no glimpse of the eternal nature of those sciences which foster and preserve mankind in its mortal continuance and carry it forward to constantly ascending levels.

With the Reformation, many of the noble and beautiful things that man had acquired by long and painful toil were flung aside and during the first period of secular nursing in Protestant countries, we find a condition of vulgarity and loathsomeness accompanying the care of the sick in institutions which even yet casts an onus upon the name of nurse. The care of the suffering was turned over to rough and untrained hirelings and the medical profession, which was progressing constantly along purely scientific lines, unmodified by the social needs of the sick, accepted these rough caretakers and apparently had no thought of helping to improve their abjectly inferior and degraded status, either for the sake of the worker or the patient whom she tended. Just as during the Reformation the beautiful music, the carvings and paintings were cast out of the reformed churches, so in the first transition from monastic to secular nursing, the sisters who exemplified the dignity of religion, of self-consecration, and of willing service, were replaced by hard, coarse women whose need for bread made them seek it in a service which, shorn of its religious meaning and unredeemed by any thought of art or methodic progress in its performance, was most naturally considered a menial occupation.

This state of things was bound to yield to the great spirit of social reform which stirred like a breath of life through England in the middle of the last century, and which was a legitimate reaction to the terrible wrong put upon the laboring people by the frantic industrialism impetus in the events of the Crimean War, when the miseries of the British soldier because of lack of nursing care, were made apparent to the people in their home land. It was at this period that Florence Nightingale became the interpreter of the finer and nobler instinct which lay unused in the natures of her countrymen, and who, through the agency of that war, was able to break through the prejudice and apathy of public feeling which condemned English gentlewomen to a sphere of activity entirely within the individual home. Once again nursing awoke in response to the call of a great need in a great hour, and enriched itself with the fine and beautiful things which religion, compassion and self-sacrifice have ever as their gift. I think we may fairly say, also, that one of the earliest influences in the emancipation of women was the interest involved in the higher development of secular nursing. The knell of the "hireling" had sounded. Nursing as an occupation for gainful purposes only, was at an end. Once more its feet were set on the century-old path of service to mankind.

But Florence Nightingale had perceived that nobility of purpose, aptitude for the practice of nursing, and a love of mankind were not enough to secure nursing from another period of decadence and perhaps total eclipse. Her clear vision saw nursing as one of the fine arts depending for its improvement and continuance upon a body of well-defined principles which should relate it to medicine so that the incalculable benefits of that science might be available to man in new and countless ways. She saw the nurse as the foster-mother of mankind. Most happily, the gift of two hundred thousand dollars, given to her by a grateful country because of her service in the Crimean War, made it possible for her to found a school of nursing whose *primary* object was the education and training of the nurse. Although the first nurses trained in this school were given instruction necessarily far inferior to that given in the majority of our hospital schools of today, they were, at entrance, a decidedly hand-picked group and many of them were women already possessing a considerable degree of education and culture. These pioneers and founders went forth somewhat as the apostles did in an earlier time, filled with zeal and fervor and counting no labor or sacrifice too great to increase and further the cause of nursing by founding other schools. The record of these women is a very bright page in nursing. The thing that is incomprehensible to me is that when the idea of the training school was transplanted to this country, we took the ideal without providing the practical means for its development. We made little or nothing of the fact that definite, assured means of material support must underlie all efforts to provide education. In our eagerness to spread and propagate this wonderful system we went ahead too fast and became confused in our reasoning.

In England no great use is made of nursing as a luxury for the well-to-do classes in their own homes, so that there could not be so great a demand for the production of the so-called private duty nurse, and consequently not so great a stimulation for the rapid production of women able to render this type of service. From the first they seem to have been concerned with the production of nurses who could either serve the sick in hospitals, accomplishing at the same time the reform of these institutions, or could develop a visiting service to the poor. In our own country, everything spreads as fast as a prairie fire and within a very short time after the training school idea had reached the United States, our hospitals had discovered the essential utility of a training school in the carrying out of their own purposes. Because of all these things and of many more which no doubt could be deduced from a careful study of the social and economic tendencies of the last fifty years, training schools for nurses in this country have become so inextricably confused with the practical and immediate needs of the sick within the hospital walls that the public knows much of the hospital and but little or nothing of the processes which yield one of the hospital's finest fruits—the nurse.

Nurses' Position Has Changed

At the same time, nurses have lost the recognized importance of their original position in the development of hospitals. Secular nurses are not associated with the hospital as owners or as prime movers in their tendencies and purposes. As pupils they make an important contribution to the support of these institutions through a great deal of voluntary service, just as physicians make an important contribution through service as well as their medical research. But, whereas this service on the part of the physician is generally known and recognized by the public, who, because of its interest constantly gives large

sums of money for the endowment of medical schools, the services of nurses in connection with hospitals are not so recognized, and the public feels, if it thinks at all about it, that the student nurse receives as much as she gives when she receives a diploma at graduation, and it does not question the validity of that diploma or the conditions under which she has received it. Did the public but know that student nurses annually contribute many millions of dollars to the maintenance of hospitals over and above the cost of their own maintenance, and the insufficient education provided for them by these hospitals, it would surely deal more fairly with them.

But what I should like more than any one thing to express myself about is the attitude of nurses toward the hospitals and toward the public. I feel that until they have secured the active cooperation and financial help of the public, they must consent to help support our great hospital system by continuing to give more than they actually receive as students; that they must consciously cooperate with it in a way to make the continuance and growth of these institutions possible; that they must once again call upon their treasures of self-sacrifice and devotion in the interests of a common cause—the cause of better service to mankind. Their relationship to the hospital cannot, as yet, be adjusted on a basis of strict justice—not until public opinion is willing to underwrite such a readjustment by the gift of funds for this special purpose. Once again a great revival must overwhelm and bear nursing on to new goals. If, in these days of world financial depression and strain, our hospitals are, in any great measure suddenly deprived of the work of their student nurses, even to the extent of giving these student nurses full return for the work which they perform, there is no doubt but that many of them would either close their doors, or would revert to the sterile practice of operating their institutions with permanent attendants who would, in a sense, resemble those who were employed before the reform of secular nursing through the training school.

The student nurses and the medical interns who pass in never-ending line through the hospitals and who, going forth, minister to the multitude beyond the walls, constitute in a certain sense the productive, the fertile side of the hospital endeavor; the side which relates it to the community and to the state. But what seems of first consequence to me is that you should not only be conscious of your contribution to these institutions, but that you should give it in a spirit worthy of your great traditions. The vocational side of your profession is the precious growth of long centuries, relating you to the care of mankind in so essential a way that that you cannot escape its implications. And the nurse who seeks primarily her own selfish advantage in any sense, is as repugnant to one's instinct as the clergyman or physician who makes of his calling primarily a personal matter.

More Nurses Must Be Trained

On the hospital schools, as matters now stand, largely depends the production of more nurses, and more nurses there will have to be to satisfy the growing demand for the education and the care of hundreds of thousands of our population whose needs are constantly more apparent to us because of the progress and findings of sociology and medicine. The application of the benefits of these sciences to mankind can so largely rest with you if you will accept the obligation. Not only the public health nurse but all nurses should have an opportunity during their undergraduate years to receive that grounding in these two subjects which will teach them the interdependence of human life whether in health or in sickness.

I do not know whether or not I have made my meaning clear. Personally I feel that a nurse must have the broadest and best kind of an education, as well as technical skill, in order to do the work which modern civilization asks of her. But I also feel that in some way she must consciously help support the hospital as part of her duty to those beyond its walls; that she must reënter the hospital complex as one of its prime movers, and promoters; that she must reorganize her relationship and claim a part in the productive enterprises of the institution. It should be her hospital, as well as her training school; her sick as well as her ward instruction.

The efforts which the members of your League of Nursing Education corporately, as well as individually, have made, and are ceaselessly making to improve the character of nursing schools in general and to relate them to the educational institutions and standards of the modern world are undoubtedly bearing fruit on every side. This effort, together with their unwearying persistence in urging upon our state legislatures the necessity of protecting a standard of nursing through state registration is worthy of the best traditions of those who have fought and conquered in any of the professions.

But the task of reforming the hospital school system in a country so large as ours, and offering such a variety in the character of administration, both politically and financially, makes the enterprise exceedingly delicate, as well as difficult, and might well discourage a group of women less devoted or with a less clear-cut object in view. It is precisely because the League of Nursing Education is made up of women intimately associated with the practical difficulties of hospitals that one feels sure that they will in time work out a plan which will reconcile all seemingly conflicting needs in the interests of the nursing care of the sick.

Nursing Link Between Public and Schools

The principal of a school of nursing will take into full consideration the fact that a student nurse has need to become skilled in the performance of her work as well as merely to acquire a knowledge of its technique; and she will, therefore, be very liberal in her interpretation of the value of much repetition of service which to a theorist might seem a waste of time as far as the student is concerned. She also sees the ward not merely as a shop or laboratory, but also as a unit, a microcosm of that great outside world where the alleviation of sorrow and suffering is the legitimate concern of the student who graduates from these classes. The weakest point in the League of Nursing Education defenses today is the lack of leisure and the lack of money with which to conduct a vigorous campaign which would reach a general public instead of the intensive audiences of the League's own professional world.

This is one reason why it seems to me that perhaps no single effort at this present juncture would be as valuable as massing the combined national nursing strength in an endeavor to carry the plea of the Johns Hopkins School of Nursing for a million dollars over the top. It would advertise the missing link—that of the direct tie between the schools and the giving public more than any other. It would bring tremendous returns for the energy expended.

The responsibility for the improvement of hospital schools of nursing must, of course, rest upon your League of Nursing Education, your alumnae societies, and district organizations. But I implore you to look over and beyond all selfish aims and considerations; accept the care

of the sick as your sacred obligation and, because of them and in their interest, press your claims for better schools not only with the unorganized public but with your state and national legislators. In a country where our founders proclaimed that our laws should make possible an equal chance for the pursuit of life, health and happiness, the obligation to see this pledge more fully filled rests in large part with your profession. You cannot have great nurses in these days without good schools and you must be insistent in season and out of season until you have made your claim clear to everyone—including those of your own number who do not make enough use of their collective strength and combined action.

BY WAY OF CONTRAST*

By LINDA RICHARDS, Foxbury, Mass.

The publication of commencement addresses is usually limited to the reports of the schools concerned, but the following address by Miss Linda Richards, who is characterized as "America's first trained nurse," deserves to reach a wider audience. Hence we value the privilege of serving as a medium for its publication.

In connection with this paper it is interesting to refer to one History of Nursing (Nutting and Dock, Vol II, page 346), which describes the efforts of Dr. Zakrzewska to establish a training school in connection with the New England Hospital for Women and Children.

Miss Richards voices the dauntless courage that enabled the early pioneers to persevere despite innumerable difficulties. This is just as necessary today, and who knows but that our successors in the years to come may look back on our struggles from a vantage point similar to Miss Richards', and see as much cause for congratulation, even though our progress seems at times slower than a snail's pace. It is stimulating to think of the vitality and optimism of this remarkable woman, eighty years young, addressing a graduating class, and never alluding to her own share in helping to bring about the changes she enumerates.—EDITOR.

Dr. Drew has honored me by asking me to speak to the nurses of the graduating class this evening. It is always a pleasure to say a few words to a class that stands on the threshold between the doors of the years spent in gaining their education and the wide world into which they go to accomplish so much good for God and humanity. You are to realize that when you graduate from this school you have by no means completed your education, but must know that it has just begun. By your training you have been fitted for the larger and broader education which is to be yours. You have received your training under most favorable conditions, and that you may more fully realize your blessings, I will compare your advantages with those of the pioneer nurses.

You have a beautiful and comfortable home to which you can go for rest when off duty, leaving the world's work and care to those who take your place. You have an eight hour day and night service. The pioneer nurses had a fifteen hour service, with their rooms opening off the wards and in some hospitals with a window between the wards and the nurse's room, so that the nurses while off duty for a little while could look into their ward to see that all was right. You have received every step of your education from trained and progressive teachers. The pioneer nurse had no teachers. Orders were given, and these orders were carried out by them as best they could, often in a manner which received criticism. The early nurses had no half days off duty. Every other week three hours was given them. Church privileges were seldom given; when such came, they were counted great blessings.

You, today, are instructed in every branch of your work, with no fear that your instruction will encroach on forbidden ground. The early nurses were carefully kept from certain knowledge which was thought to belong only to the doctors. So often we heard that "A little knowledge was a dangerous thing for a nurse." Today all such thoughts have passed away and nurses are not only expected, but required to know all things which will add to their proficiency. In the early days, doctors did not like trained nurses, often expressing the fear that they would become doctors. They were far from being friendly. As the years have gone by and nurses by their good work have proved themselves of great service to doctors and humanity, the attitude of the medical profession has changed to respect and appreciation; and today as you enter the field which you have not yet tried, you meet friends who are ready to assist you in any way possible. Consider, I ask you earnestly, all the blessings under which you have received your education. You have been in one of the foremost hospitals in the state, with a superintendent who has in all ways given you every advantage in his power, and with a superintendent of nurses who stands in the foremost rank of our profession, and with able instructors in every branch of your work.

Very great and grave responsibilities rest upon you individually, and as a class, for you are to be representatives of one of the grandest professions. Yours is to be a work for God and humanity. If you would succeed, you must enter into your work with your whole soul. You are to work for the uplifting of your profession and for the betterment of humanity. You are to be loyal to your hospital, your school, your alumnae, your companions, your teachers and your profession. You are to keep in touch and sympathy with all advance movements. You are to be brave, courageous, gentle, kind; a friend to all who suffer; and strength to the weak. You are to carry good cheer to the disconsolate and in every step of the way prove yourselves real nurses and God-fearing women. And as you carry blessings to others, untold blessings will come to you.

*Address to graduating class of the City Hospital, Worcester, Mass., by Linda Richards.

FIFTY SCHOOLS MAY UNITE IN PRELIMINARY NURSING COURSE

If the recommendations of the Hospital Association of Philadelphia and the Philadelphia League of Nursing Education are carried out, this month all schools of nursing in the city will send their students to the University of Pennsylvania for a preliminary course in nursing education now being taught in fifty separate training schools in Philadelphia and the vicinity. The curriculum to be adopted is that prepared by the National League of Nursing Education. Subjects are to be taught by qualified instructors now teaching in the Philadelphia Training School for Nurses. The committee's plan is that the course be only experimental. If successful, it will probably be continued for those students entering training schools in September.

"To go about with one of the public health nurses and watch her ministrations on a morning round is to consider in amazement what loss of life might be prevented if such 'stitch in time' service were in effect everywhere."—Selected.

DIETETICS AND INSTITUTIONAL FOOD SERVICE

Conducted by LULU G. GRAVES,
Supervising Dietitian, Mt. Sinai Hospital, New York.

HOSPITAL TRAINING OF DIETITIANS AT PETER BENT BRIGHAM HOSPITAL

BY OCTAVIA HALL, HEAD DIETITIAN, PETER BENT BRIGHAM HOSPITAL, BOSTON.

"A PERSON versed in dietetics" is the non-committal manner of defining a dietitian in the latest Standard Dictionary. The latest Webster's and all encyclopedias apparently wish to avoid the subject altogether; no mention is made of this class of person. It was then necessary to formulate a definition of a dietitian and it immediately became obvious why this word was left out of the dictionary. A person versed in dietetics who not only has ability to impart this knowledge to others and who is able to administrate all procedures necessary for the carrying out a dietary plan, may be somewhat of a definition of a dietitian. From this definition it is evident what the purpose of the college woman entering a hospital to train as a dietitian should be. It is first necessary, however, to set some definite standard to aid in determining the type of person who will best serve as dietitian.

A college woman with a B.S. degree and a major in home economics is best adapted for this purpose. She should have reached the age of discretion and should possess a degree of poise necessary for one in an administrative position. This seldom comes before the age of twenty-four or five. It is very necessary in assuming the responsibility of training a dietitian to have first a complete estimate from her college or university of her ability for such work, her shortcomings, and if possible, something of her home environment. The element of personality is equally as important as training. Personal appearance also has much significance. The psychology of the effect of stature in administrative work is important. Women who are very small of stature find the work much more difficult. This is not gainsaying the fact, however, that many small women have been extremely successful in administrative positions. Personal tidiness and cleanliness of uniform are essential. A professional attitude at all times is very necessary. This attitude must be relieved, however, by a ready sense of humor in the times of stress and strain which come now and then in dealing with numbers of people. A dietitian, too, must always have her temper under control. It can *apparently* be lost for forceful emphasis upon some point, but in reality, *never*.

The student entering upon her duties at Peter Bent Brigham is given a printed list of instructions as to hours of duty, personal appearance and behavior while on duty.

The main kitchen of the hospital is the first "piece de resistance" given to the student. A month is generally spent here. Instructions are given students to watch each worker individually for a period so that she may learn all duties in particular. The kitchen as a whole and the preparation of all the parts of a meal present themselves as the next problem. When the matron in charge of the kitchen is absent one afternoon a week and on alternate Sundays, the supervision of the kitchen is given to the student. This gives her an opportunity for actual experience in handling people. During the first month an interview is had with the student and the type of work she wishes to do after leaving the hospital is discussed; attention is drawn to special points in the course having bearing upon her future work.

The student dietitian is next sent to the main serving room. Four dining rooms accommodating in all, over 300, are served from this central room. The service of food and the managing of employees who serve it is the point to be studied. Emphasis is laid upon uniform servings of food served attractively and hot, if it should be hot, or cold, if it should be cold. The care of the dining rooms, the neat appearance of tables and clean dishes must be drawn to her attention. The pleasure of eating well cooked food may be completely destroyed by the appearance of an untidy plate, too large a serving, and poor service upon the part of the waitress, it must be brought out. All of these points are important ones to the dietitian. The actual supervision of the serving room is also given to the student when the matron in charge is away.

Computation of Diets

A week's experience is given next in the Infant's Hospital which is situated across the street. Here the student learns much of the computation and preparation of many kinds of formulae. The modification of milk and preparation of diluments of every description are taught in the most scientific manner. This work is often found helpful after entering upon the duties of the diet kitchen, as formulæ are at times ordered for patients in the hospital.

The first few days in the diet kitchen are spent with the nurse who weighs the food for the diets. It is most necessary for the dietitian to be familiar with the weights of food in order to compute diets understandingly. She

must know that 100 grams of lettuce is too much for a salad and how many grams of meat is a moderate serving. Time is spent with the three nurses in the diet kitchen learning their duties and division of work. After the student has the administrative end in mind, she is next given instructions as to the calculation of weighed diets. The main points to be considered in writing a diabetic or nephritic diet, for example, are explained by the assistant dietitian. The diets are carefully gone over, and any dietetic errors are pointed out and explained to the student so that a repetition of error may not be made. Visits conducted by the dietitian to the patients and notes concerning the diet are made. The foods which are liked and disliked are noted, bedside charts examined, and the patient's condition with reference to his diet observed. Ward kitchens are visited at the meal time. The importance of the condition in which the diet arrives from the diet kitchen is emphasized as one cannot expect to have an attractive tray served to the patient if the food has not been properly transported to the ward.

Seven weeks are spent in the diet kitchen, during which time a schedule of visits is planned to other hospitals, dispensaries, and clinics and time is given to follow this schedule.

Experience in Ordering Supplies

While in the diet kitchen, the student is given experience in ordering daily and weekly supplies; she also keeps the daily cost of supplies and computes the per capita cost once each week. A graphic chart is kept of the rise and fall of expense. This is found to be helpful and is also an incentive for a student to be more economical than the preceding one.

One week is spent in the dietitian's office. The accounting system for the department is studied and the hospital store is visited. Here the system of handling foods, checking in supplies and sending out of supplies is explained.

A visit to the market in company with the dietitian and the superintendent is planned. Marketing on a large scale is done and the policy of dealings made as clear as possible. Buying can never be taught by observation; actual experience is necessary, and as no hospital will ever trust a student dietitian to do this work, she gets little real benefit from her trip to market.

Menu writing for private patients and ward patients, doctors, nurses and employees, is next taught the student. The requisitioning of food from the store is at first always a difficult problem; the amounts per person of meats, vegetables, and groceries have to be learned. Classification of food for the convenience of the steward and bookkeeper must be born in mind also.

Weekly Student Conferences

Every Tuesday afternoon, a conference with the students is planned. At these meetings, subjects of dietetic interest are discussed and problems which come up daily are talked over. Stress is laid upon the fact that the hospital is for the patients, and that efficient service to them and to those who care for the patients is their first duty. The instruction of nurses in dietetics is discussed and a suggested outline given. Classes in cookery for the nurses conducted by an assistant dietitian may be attended by the student and, at times, actual practice in teaching the nurses given.

A month may be added to the course if desired and spent in the metabolism laboratory. Here the student dietitian learns to do the metabolism of patients and becomes fairly accurate in gas analysis. The doctor in charge assigns daily readings and a short lesson is given each day.

Last March a nutrition clinic was started at Peter Bent Brigham and now the student who wishes to enter social dietetics work may spend extra time in this clinic. Almost every common type of disease that can be treated by diet is referred here, and much experience may be had in clinical dietetics. Visits to the Boston Dispensary Food Clinic are planned and methods compared.

The half day that the student has free from duty each week and every other Sunday are given as much as possible in company with some one other student or with an assistant, as it is important to keep the student from being lonesome since her hours of work in the hospital are long and tiresome.

Hospital Independent of Student Help

The hospital, however, does not depend upon the work of the student dietitian. At any time, the system could go on without student held. This seems wise for two reasons:

1. The dietitian would feel obliged at times to train a student who did not come up to set standards in order that the necessary work of the department might go on.
2. Student dietitians should not be exploited for the work a paid employee can do.

Within the last two and a half years in the Peter Bent Brigham Hospital, twenty-six student dietitians have taken the course. All but two were college or university graduates with a B.S. degree. These two had a course in a normal school and each had had two years' experience as dietitians in addition to their schooling. Eighteen of the students are now engaged in hospital work; four are married; two are teaching home economics; one is doing Red Cross nutrition work; and one is not engaged in dietetic work.

With this summary it seems well to add what future improvements are hoped for in the course:

1. Lectures will be given every few months by a resident physician and who will explain the medical aspect of diseases in relation to diet, such as the different kinds of nephritis, diabetes, typhoid fever, etc.
2. More work in the nutrition clinic will be planned as the clinic increases in size.
3. A few days will be spent in the housekeeper's department. This has two objects in view: first, to learn points in general hospital housekeeping, the methods used in the hospital laundry, linen rooms, and sewing room; and second, to learn the housekeeper's point of view. It is hoped that this will help to bring about a more complete spirit of cooperation between the two departments.
4. More time will be spent in training the student to plan menus and service of food for private patients.
5. Upon completion of a new nurses' home, rooms will be provided by the hospital for the student dietitian. The hospital does not derive enough benefit from the service of a student to pay for rooms outside of the institution. However, board, laundry, and free medical care in case of illness are always given.

By following out these improvements and always looking for suggestions for betterment, Peter Bent Brigham Hospital hopes to attain the aim of dietetics, which is the application of the science of dietetics to bring about health, economy and pleasure.

Miss Helen Glasier, another Cornell graduate, is assistant dietitian at Mount Sinai Hospital, New York. Miss Glasier had student dietitian training at Buffalo Homeopathic Hospital.

FEEDING HIGH FAT DIETS IN DIABETES

By MISS DOROTHY M. STEWART, Special Dietitian, University of Michigan Hospital, Ann Arbor, Mich.

SINCE the publication of the data* on high-fat feeding in diabetes, frequent inquiries have been received as to the dietetic management of such a scheme. The refrain we hear most consistently is: "We can't get the patients to eat it." Inasmuch as we have not experienced that difficulty, it has been suggested that there may be some points of interest in our food care of these patients.

One never realizes so keenly the nicety of the balance in a normal ration until that balance is no longer possible to keep. Any change in the relative amounts of the foodstuffs brings us to the problem of so choosing and adjusting the food that it not only satisfies the requirements of an abnormal metabolism but also resembles, as nearly as possible, a normal ration. The situation of the patient corresponds to that of the foreign-born coming to a land of new food customs. The foods to which he has been accustomed he cannot have. He is lost. Anything that even looks familiar is a wellspring in the wilderness. And so the arrangement of food in the meal and in the day, as well as its palatability, are points that need to be considered in planning dietaries for the diabetic.

In a normal diet, fat is carried by the protein and carbohydrate. We eat it as butter on our bread and vegetables. It occurs with the protein of meats. When the protein and carbohydrate of the diet are cut down, the quantity of fat which would ordinarily be served proportionately decreases. If, for example, we compare a normal ration of 75 grams protein, 85 grams fat and 300 grams carbohydrate with a diabetic diet of 55 grams protein and 35 grams carbohydrate, it becomes evident that in order to obtain a fat content of 200 to 225 grams, considerable forcing must be done. It must also be more or less camouflaged in order to be palatable and avoid gastric disturbances. Here we use a liberal amount of forty per cent cream in ice creams, custards, cream soups, gelatine desserts and salad dressing. Mayonnaise dressing furnishes fat in a concentrated form and can usually be used freely. Ice creams made of cream sweetened with saccharin and flavored are a welcome item on the menu and contribute generously to the fat total. For one or two servings it may be simply prepared by putting metal cups in a pan of ice and salt, and stirring from the edge as it freezes. Custards yielding a minimum of protein and a maximum of fat may be made with cream and egg yolks. Jellies serve as an excuse for whipped cream and vegetables for butter and salad dressings, and so on down the list.

Following are a few recipes:

Baked Custard

Food	Amt.	Pro. gms.	Fat gms.	Carbo. gms.	Calories
Egg yolks, 2	3 gms.	4.70	10.00	....	109.0
Cream, 40%	70 gms.	1.54	28.00	2.10	266.7
Vanilla	4 drops	....	....	....	....
Saccharin	¼ gr.	....	....	....	....
Totals	....	6.24	38.00	2.10	375.7

Beat egg yolks with fork, add cream, then saccharin dissolved in vanilla. Bake in a pan of water in a slow oven until knife will come out clean.

Nut Charlotte

Food	Amt.	Pro. gms.	Fat gms.	Carbo. gms.	Calories
Cream, 40%	70 gms.	1.54	28.00	2.10	266.7
Walnuts	10	1.84	6.44	1.30	70.3
Saccharin	¼ gr.	....	....	....	....
Vanilla	4 drops	....	....	....	....
Totals	.....	3.38	34.44	3.40	337.0

Whip cream, add finely chopped nuts, then saccharin dissolved in vanilla.

Orange Jelly

Food	Amt.	Pro. gms.	Fat gms	Carbo. gms.	Calories
Gelatine	5 gms.	4.57	....	....	14.8
Cold Water	1 Tb.	....	....	....	....
Boiling Water	⅓ c.	....	....	....	....
Orange juice	10 gms.	....	....	1.08	4.3
Saccharin	½ gr.	....	....	....	....
Cream, 40%	30 gms.	6.66	12.00	.90	114.3
Totals	.....	5.23	12.00	1.98	133.4

Soak gelatine in cold water two minutes. Dissolve in boiling water. Add saccharin dissolved in orange juice. The cream may be served with the jelly or whipped and folded in when the jelly is partly stiff.

Chocolate Pudding

Food	Amt.	Pro. gms.	Fat gms.	Carbo. gms.	Calories
Cream	100 gms.	2.20	40.00	3.00	381.0
Cocoa, ½ tsp.	1 gm.	.21	.28	.37	4.9
Agar agar	1 tsp.	....	....	....	....
Vanilla	⅛ tsp.	....	....	....	....
Saccharin	.....	....	....	....	....
Totals	.....	2.41	40.28	3.37	385.9

Mix cocoa with agar, add cream and steam in pan of hot water for 20 minutes. Add saccharin dissolved in vanilla and chill.

Cream Dressing

Food	Amt.	Pro. gms.	Fat gms.	Carbo. gms.	Calories
Cream	350 gms.	7.70	140.00	10.50	1333.5
Egg Yolks (8)	120 gms.	18.84	39.96	....	435.6
Salt, 1½ tsp.					
Pepper, ⅛ tsp.	10 gms.	....	....	....	....
Mustard, 2 tsp.					
Vinegar	125 gms.	....	....	....	....
Butter	70 gms.	.70	59.50	....	533.3
Totals	.....	27.24	239.46	10.50	2307.4
Per 50 gms.	.....	2.01	17.73	.77	170.9

Add scalded cream to beaten egg yolks and cook in a double boiler, stirring constantly until mixture forms a smooth coating on the spoon. Add melted butter, then seasonings mixed to a smooth paste with vinegar.

Mayonnaise

Food	Amt.	Pro. gms.	Fat gms.	Carbo. gms.	Calories
Egg yolks, 6	90 gms.	14.13	29.97	....	335.7
½ c. vinegar	120 gms.	....	....	....	....
Oil, 1 qt.	700 gms.	....	700.00	....	6300.0
Mustard, 1 tb.					
Salt, 2 tb.	30 gms.	....	....	....	....
Paprika, ½ tb.					
Totals	940 gms.	14.13	729.97	....	6635.7
Per 50 gms.	.....	.75	38.82	....	352.9

Mix dry ingredients, add egg yolks and beat slightly. Add one half the vinegar and mix well. Add oil slowly, beating constantly until all is added. Thin if necessary with rest of vinegar. If dressing should curdle, take three egg yolks and add curdled mixture to them, slowly beating as though it were oil.

*Newburgh, L. H., and Marsh, Phil L. Arch. Int. Med. *26*, p. 647, 1920.

Newburgh, L. H., and Marsh, Phil L. Arch. Int. Med. *27*, p. 699, 1921.

TOMATO JELLY

Food	Amt.	Pro. gms.	Fat gms.	Carbo. gms.	Calories
Tomatoes	100 gms.	1.20	.20	4.00	23.0
Gelatine	5 gms.	4.57	....	....	18.3
Cold water	.....	....	....	....	.. .
Salt, ¼ tsp.	.....	....	....	....	....
Pepper, paprika and celery salt	.....	....	....	....	....
Totals	.....	5.77	.20	4.00	41.3

Soak gelatine in cold water two minutes. Dissolve in boiling tomatoes, add seasoning and chill. Serve on lettuce with mayonnaise or cream dressing.

VEGETABLE SOUP

Food	Amt.	Pro. gms.	Fat gms.	Carbo. gms.	Calories
Celery	5 gms.	.05	....	.15	1.0
Carrots	20 gms.	.22	.08	1.86	9.0
Onions	5 gms.	.80	.01	.49	2.4
Cabbage	6 gms.	.08	.01	.28	1.6
Butter	15 gms.	.15	12.75	....	116.3
Broth	.....	....	....	....	....
Totals	.....	1.30	12.85	2.78	130.3

Chop vegetables finely and brown in butter. Add broth and simmer until tender. Season with salt and pepper.

Four Standard Diets

Our scheme of diabetic feeding is a series of four standard diets.

Diet No. I yields 18 to 22 gms. protein, 12 to 15 gms. carbohydrate, 800 to 1,000 calories.

Diet No. II yields 25 to 30 gms. protein, 18 to 22 gms. carbohydrate, 1,200 to 1,600 calories.

Diet No. III yields 30 to 35 gms. protein, 25 to 30 gms. carbohydrates, 1,600 to 2,000 calories.

Diet No. IV yields 50 to 60 gms. protein, 30 to 40 gms. carbohydrate, 2,000 to 2,500 calories.

DIABETIC DIET NO. I

Standards:
Protein, 18-22 gms.; Carbohydrate, 12-15 gms.; Calories, 800-1,000.

Food	Amt.	Pro. gms.	Fat gms.	Carbo. gms.	Calories
Dinner					
Boiled ham	25 gms.	5.05	5.60	....	70.5
Cabbage with vinegar, salt and pepper	50 gms.	.80	.15	2.80	16.0
Asparagus with butter	90 gms. 20 gms.	1.35 .20	.09 17.00	2.52	16.2 153.8
Tea broth	.....	....	....	....	....
Supper					
Bacon with spinach	15 gms. 90 gms.	1.57 1.89	9.72 .27	.... 2.58	93.7 21.6
String beans with French dressing	90 gms.	2.07	.27	6.66	17.8
Oil	30 gms.	....	30.00	....	270.0
Vinegar	15 gms	....	....	....	....
Salt, pepper, paprika	.....	....	....	....	....
Tea broth	.....	....	....	....	....
Breakfast					
Bacon with egg (1)	15 gms.	1.57 6.70	9.72 5.25	....	93.7 74.0
Coffee broth	.....	....	....	....	....
Totals	.....	21.20	78.07	14.66	827.3

Most of our patients are discharged on Diet No. IV, which, it will be seen, is a distinctly liberal diet. Samples of Diets I and IV are given, which illustrate the general plan of working in the high fat.

There is ample opportunity for exercise of humanity in planning food for patients of this type, for few there be of us whose outlook on life is not more or less influenced by the meals that are set before us. And if this is true of normal individuals, what of those whose food is a matter of life and death to them. A little understanding and imagination added to the diet go a long way both from the patient's point of view and the dietitian's. For, after all, what remains on the tray is as much an aggravation to the dietitian as it is a disappointment to the patient.

DIABETIC DIET NO. IV

Standards:
Protein, 50-60 gms.; Carbohydrate, 30-40 gms.; Calories, 2,000-2,500.

Food	Amt.	Pro. gms.	Fat gms.	Carbo. gms.	Calories
Dinner					
Roast chicken	100 gms.	19.30	16.30	....	224.0
Squash with butter	120 gms. 10 gms.	1.68 .10	.60 8.50	10.80	55.2 76.9
Head lettuce with Thousand Island dressing	.....	.72	.18	1.74	14.4
Mayonnaise	50 gms.	.75	38.82	....	352.9
Pickles (chopped)	10 gms.	.08	.02	.31	1.7
Pimento "	10 gms.	.16	.01	.45	2.7
Celery	60 gms.	.66	.06	1.96	11.4
Olives	30 gms.	.24	6.06	2.55	65.7
Ice cream	90 gms.	1.98	36.00	2.70	342.9
Coffee	.....	....	....	....	....
Supper					
Oyster stew:					
Oysters	30 gms.	1.80	.39	.99	14.7
Cream	90 gms.	1.98	36.00	2.70	342.9
Hot water to fill bowl	.....	....	....	....	....
Cabbage salad:					
Cabbage	50 gms.	.80	.15	2.80	16.0
Onions	10 gms.	.16	.03	.99	4.9
Pimento	10 gms.	.16	.01	.45	2.5
Mayonnaise	50 gms.	.75	38.82	....	352.9
Orange jelly	1 recipe	5.23	12.00	1.98	133.4
Tea	.....	....	....	....	....
Breakfast					
Grapefruit	50 gms.	.39	.10	5.04	23.0
Bacon with two eggs	..... 25 gms.	2.62 13.40	16.20 10.50	....	156.2 148.0
Coffee with cream	30 gms.	.66	12.00	.90	114.3
Broth	.....	....	....	....	....
Totals	.....	53.62	232.75	36.36	2456.6

NEWS ITEMS

Miss Eleanor Wells has charge of the entire dietary department of the Maryland State Normal School at Towson. There are 400 girls in the dining halls of this school.

Mrs. A. W. Loudon is doing nutrition work at the University of North Dakota. Mrs. Loudon was formerly dietitian at St. Luke's Hospital, Fargo, N. D., and may be better known to some as Dorothy Ayers.

Mrs. O'Dea of Johns Hopkins has had the unique experience of training four new assistants in three months' time. Miss Louise Yeomans, a graduate of Wisconsin, has been given supervision of the diet school, with Louise Canham, University of North Dakota, as her assistant. Miss Esther Wright, Kansas State College of Agriculture, is another of Mrs. O'Dea's assistants, and Miss Phyllis Rowe is able once more to take up her duties after an illness of almost three months.

Miss Susan Walker is now at the Woman's Hospital, Cleveland, as dietitian. Miss Walker was dietitian at Mount Sinai Hospital, New York, for some time.

Miss Ellen Gladwin has given Miss Loraine Van Wagenen the appointment as her assistant. Miss Van Wagenen is a graduate of the home economics department, Cornell University, and took student training with Miss Gladwin at Jefferson Hospital.

The December meeting of the New York Association of Dietitians took the form of a dinner held at the Y. W. C. A. building on December 14. There was a large attendance, and interesting program and an excellent dinner. Miss Lulu Graves and Mrs. Mary de Garmo Bryan were guests of the evening and both gave short talks in addition to the regular program.

HOSPITAL EQUIPMENT AND OPERATION

With Special Reference to Laundry, Kitchen and Housekeeping Problems

Conducted by FRANK E. CHAPMAN, Director
Mt. Sinai Hospital, Cleveland, Ohio

CRUSHED ICE CONTAINERS FOR THE HOSPITAL

A RECENT questionnaire directed by THE MODERN HOSPITAL to a number of hospitals of varying size disclosed the fact that in many of these institutions primitive and makeshift methods are being employed in chipping ice and in the transportation and storage of it. Although in many hospitals modern methods are employed, in others nurses are called upon to chip ice with an ordinary hand pick or to crush it in a bag on the ward floor.

Commercial houses have made a study of the various problems connected with the use of chipped ice in the hospital and have provided means not only for crushing ice, but for its proper storage with resultant convenience and unnecessary waste.

There is a considerable difference in the routine practiced in various institutions in the preparation of chipped ice. In some hospitals the ice is crushed in one of the main service rooms and transported to the various wards for storage in refrigerators provided for that purpose. In other institutions individual ice crushers are placed in each ward. There are arguments in favor of both of these methods, but, from the statements of manufacturers as to the types of ice chippers sold, it would seem that the practice of having a central plant for chipping ice is gradually being done away with because of the meltage of ice in transportation and the inconvenience attending its delivery.

Fig. 2.

To avoid such difficulties, manufacturers recommend the use of a small hand ice chipper, similar to that shown in Fig. 1. This is generally installed in the ward kitchen or service room and the ice is chipped by the nurse when needed. The ice is delivered to the service rooms in small cakes of proper size for use in the chipper and is stored in the ordinary ward refrigerator, where it aids meanwhile in refrigeration.

The power type of ice chipper is usually installed in the main kitchen or in one of the adjoining service rooms in close proximity to the refrigerating plant or the large storage refrigerator. Such an installation as is shown in Fig. 2 is designed to crush ice for use in every part of the institution, for wards, ice cream freezers, and such kitchen purposes as needed.

In Fig. 3 the illustration shows a typical installation of the ice breaker and also the ice cream freezer and similar equipment. The convenience of such an arrangement is at once apparent and might well be considered as ideal where the large power ice breaker is employed.

Fig. 1.

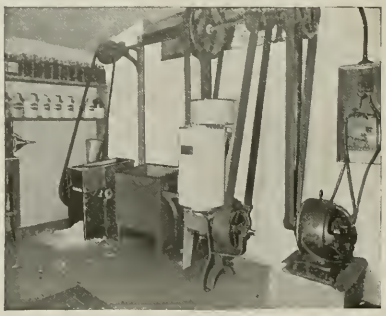


Fig. 3.

There has recently been introduced a combination ice crusher and refrigerator which apparently has many ad-

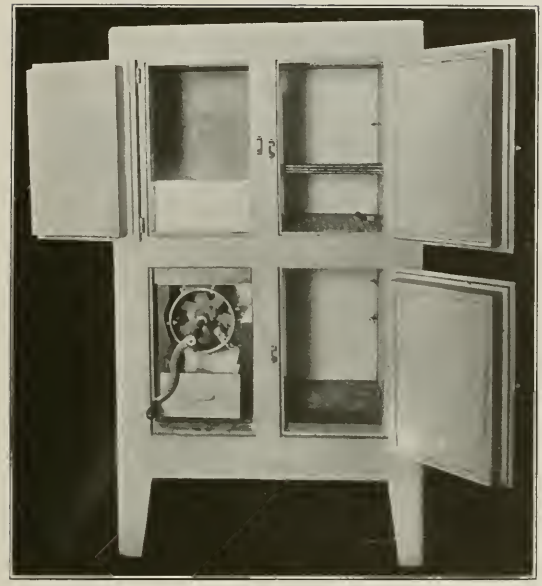


Fig. 4.

vantages over types now on the market. This outfit consists of a refrigerator of the type customarily employed in ward kitchens or service rooms, which has two large

Fig. 5.

compartments for food. The ice compartment is likewise similar to the ordinary refrigerator, with the exception that the bottom of this compartment is really the top of an ice crusher or chipper. Directly below the ice chipper is a galvanized iron drawer for holding the ice when chipped. Fig. 4 shows this refrigerator with the doors open revealing the ice chipper with drawer below. Fig. 5 shows the same refrigerator with the doors closed but with the handle of the ice chipper projecting through the lower door directly above the drawer for the chipped ice.

Assuming that this new equipment is practical in design, it would seem to offer a plausible and practical solution of the chipped ice problem in the hospital. It permits the ice to be delivered to the ward refrigerator in a single large cake. The ice can be chipped or crushed without opening the door of the refrigerator and it is not necessary to chip it in large quantities. The small amount that may be retained in the drawer is kept from melting by the temperature of the refrigerator and likewise it is an aid to general refrigeration. Drainage is provided for in connection with the drainage from the ice box and the convenience and economy of the entire plan are obvious.

Another concern has recently introduced an insulated container, designed not only for storage but for transportation of chipped ice throughout the hospital. (Fig. 6.) This is not a large or cumbersome device but is designed for use in a single ward. The suggested routine for use of this equipment is to have the container filled with chipped ice at a central ice breaking plant and then wheeled to the ward where it is to be used. The thorough insulation of the container insures a minimum melting of ice; the fact that it can be easily wheeled would permit the filling of ice bags, if desired, at the bedside of the patient. A stopcock and drain are provided so that the accumulated water in the container can easily be drawn off. The container is similar in design to a single compartment fireless cooker, and being mounted on a wheeled

Fig. 6.

carriage, it provides not only storage but easy transportation of the chipped ice about the hospital.

There are a considerable number of ice boxes designed solely for the storage of crushed ice. Fig. 7 is a standard type of such a box, in this instance being made with a counter-balanced hinged top; it is the same type

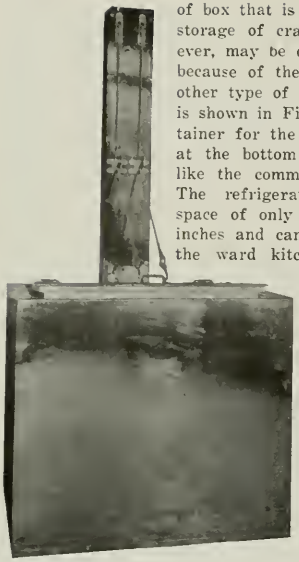


Fig. 7.

of box that is used in hotels for the storage of cracked ice. This, however, may be open to some criticism because of the space required. Another type of individual refrigerator is shown in Fig. 8. In this the container for the crushed ice is hinged at the bottom and opens somewhat like the common type of flour bin. The refrigerator occupies a floor space of only two feet by eighteen inches and can readily be placed in the ward kitchen or service room where it is at all times ready of access and where connection can be made with a floor drain; although, if desired, the water can be drawn off into a container. The cabinet shown is of high type construction, the exterior being of high grade porcelain enamel and the interior heavily galvanized. The cabinet has a capacity of sixty pounds of crushed ice. It is thoroughly insulated so that there is little wastage by melting. This type of box is being installed in the St. Joseph Hospital, St. Paul, Minn.

In many hospitals, however, it is desirable to incorporate the container for crushed ice in a larger refrigerator. Such a plan has apparent advantages. It insures a minimum melting of the crushed ice, and the crushed ice itself serves a refrigerating purpose while being stored.

In one of the larger eastern hospitals there has recently been installed several refrigerators with compartments designed particularly for the storage of crushed ice. These refrigerators are of the counter type, the various compartments being placed side by side. Such an arrangement is in itself very convenient as it provides a highly satisfactory working top for the nurse.

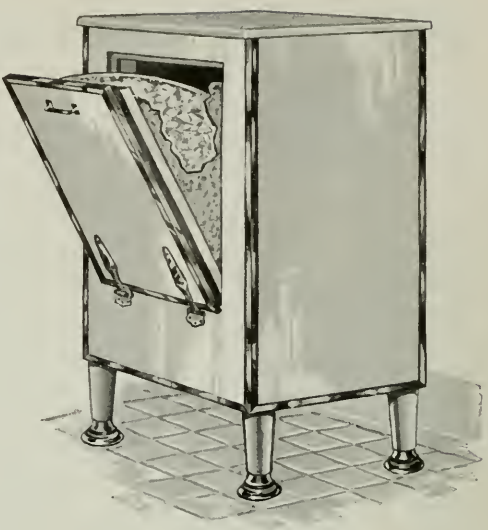


Fig. 8.

In Fig. 9 one type of these crushed ice compartments is shown. It consists of a triangular receptacle fastened to the door and opening with it. The container itself is removable so that it may be taken from the refrigerator and filled elsewhere. The chief benefit of this arrangement lies in this fact. It has the drawback, however, that when open there is no arrangement for drainage and an unsanitary and unsatisfactory condition around the refrigerator results.

A more satisfactory arrangement is shown in Fig. 10. In this the ice compartment is in the form of a tilting bin, hinged at the bottom. This is very convenient; it provides facilities for constant drainage and can not be left open. The general design of the compartment is similar to the individual refrigerator shown in Fig. 8.

Probably the most common type of crushed ice container is the kind installed in the ward refrigerators in St. Mary's Hospital, St. Louis, Mo., shown in the drawing

Fig. 9.

Fig. 10.

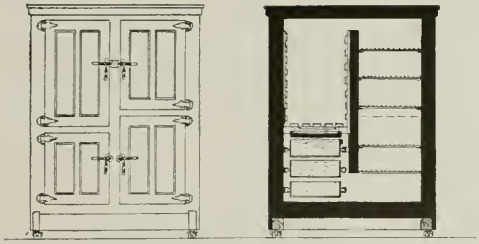


Fig. 11.

in Fig. 11. In this refrigerator one of the lower compartments has three galvanized iron drawers which are used solely for crushed ice. These are readily removable for filling and are so arranged that drainage is taken care of along with the drainage from the refrigerator proper. Since the crushed ice container is a part of the large refrigerator, melting is reduced to a minimum and the chipped ice serves a refrigerating purpose while in storage. Against this model may be raised the objection that the refrigerator must be opened whenever chipped ice is needed; there is likewise the possibility of carelessness in keeping the compartment properly closed. These details, however, may be readily overcome in the majority of hospitals.

Descriptions of these various methods of handling crushed ice should not only be of value to institutions in solving their particular problems, but they emphasize the fact that commercial houses today are studying hospital requirements and in the majority of instances are able to offer equipment to meet their particular needs. This cooperation removes the necessity of employing makeshifts which in the end prove more expensive than commercial devices marketed in quantity.

LIBRARY CARTS ARE NOW OFFERED

Many hospital superintendents do not realize how closely manufacturers of hospital equipment study various institutional problems and seek to provide equipment meeting new requirements. Here is a definite instance:

Recently several articles have appeared in THE MODERN HOSPITAL describing library service in hospitals. Mention was made in these articles of library trucks or carts used for distributing books about the institutions. Hitherto these library carts have been "homemade" affairs; or in some cases superintendents have used food carts, stretchers and other forms of regular equipment for transferring books.

Such methods, however, are more or less makeshift and while meeting the immediate need do not completely fulfill the requirements. Two manufacturers have recently introduced specially designed library carts or trucks which will conveniently carry books about the hospital. This ready cooperation should emphasize to all hospital executives the fact that commercial concerns are always ready to furnish any new device or new convenience in the way of hospital equipment and that greater economy can be realized if such matters are taken up with them promptly.

A new idea in a library truck is shown in Fig. 1. The upper part of this truck is designed like a book trough, the books resting at an angle on either side of the truck. Not only does this method of construction make the books more accessible and the titles more readily visible, but it has an added advantage of keeping the books in position. The lower shelf of the truck is made with raised edge so that it can be utilized for carrying additional books and magazines. The truck is made throughout of steel with welded joints, mounted on high grade five-inch rubber tired swivel truck wheels, with push handle at either end.

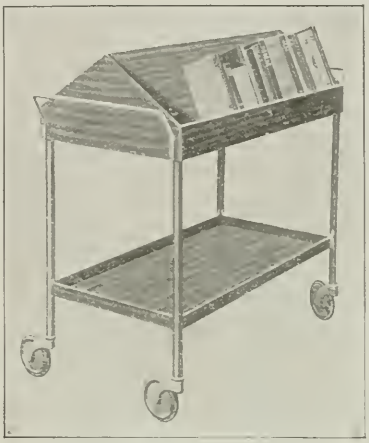


Fig. 1.

The truck is thirty-six inches long, nineteen inches wide overall and has a total height of thirty-nine inches. As a pleasing change from the customary white enamel finish, the manufacturers are supplying the cart in a grained mahogany which is at once distinctive and attractive.

Another type of library truck is shown in Fig. 2. This truck likewise is made of steel with welded joints and is

Fig. 2.

furnished with three roomy shelves. The truck is twenty-six inches long, sixteen inches wide and forty-eight inches high. The rubber tired wheels at one end are swivel; the others are stationary.

This truck is very substantially built and is easily operated, a push handle being supplied as shown in the illustration. The manufacturers in designing the truck have made it to accommodate two rows of standard size volumes on each shelf. White enameled finish is regularly furnished.

AN ELECTRICALLY OPERATED JUICE EXTRACTOR

A recently designed juice extractor offers many advantages for institution use and may be used for oranges, lemons or similar fruits.

The outfit is made throughout of acid-proof, white metal and is extremely simple in construction. It consists of extracting bulbs in several sizes, which revolve 2,000 times per minute. The fruit is simply cut into halves and applied to these rapidly revolving bulbs, which instantly extract the juice and cells without getting any of the rancid oil from the skin of the fruit. A small direct-connected electric motor furnishes the power for the extractor.

One of the biggest economies gained from the use of this extractor is that a cheaper grade of oranges or lemons may be utilized. As every buyer knows, both oranges and lemons are graded according to size, this grading being according to the number of the fruit which can be packed in standard cases. Through the use of the electric extractor described, the smaller and less expensive fruit may be utilized instead of the larger and fancy grades.

The use of this extractor enables the hospital to utilize less expensive grades of fruit.

There are ten commercial grades of oranges, ranging from eighty to the case up to 324, or twenty-seven dozen, to the case.

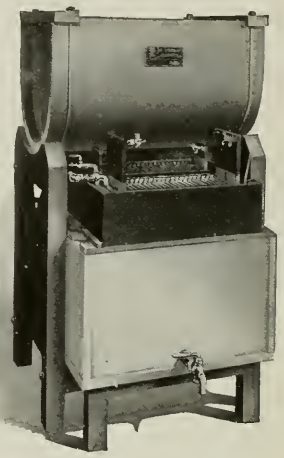
There are seven commercial grades of lemons, ranging from two hundred and forty to the case up to 490.

Hospitals will find that the smaller, less expensive sizes give an abundance of juice, and this size can generally be purchased at a lower price as it is not in as great demand for general household use.

ELECTROLYTIC BLEACH OR DISINFECTOR

Considerable interest has been manifested among hospital superintendents in an electrolyzer designed for making either an electrolytic bleach for laundry purposes or a hypochlorite adapted for disinfectant and germicidal purposes.

While the device illustrated was primarily intended for the manufacture of laundry bleach, its adaptability



to other hospital uses makes it a valuable and money-saving acquisition to hospital equipment.

The product of this machine, commonly known as electrolytic bleach, is formed by the action of a current of electricity upon a brine made by dissolving ordinary salt in water. Pure salt or sodium chloride (NaCl) is composed mainly of two elements, chlorine (Cl) and sodium (Na). To utilize these elements for bleaching purposes, means must be provided to separate them from their original state and add some oxygen. Salt brine is run through the electrolytic cell or cells where the electric current passes through it and decomposes it. This liberates sodium at one pole and chlorine at the other, and in the reaction which follows they recombine with oxygen and form what is known as sodium hypochlorite. The real bleaching agent, therefore, is oxygen confined in sodium hypochlorite (NaOCl).

Bleaching is essential in laundry practice, and, contrary to common belief, it does no harm to the linen, but adds materially to the appearance of the ironed article. It clears up the color of the linen and acts as an antiseptic as well.

The bleaching agent produced is neutral; that is, it is practically free from alkali. It is further claimed that the use of the electrolytic bleach does not hurt the linen but in reality adds to the life of it and imparts to it that much to be desired home-washed "feel."

In addition to its bleaching qualities, the hypochlorite from these electrolyzers can be advantageously used for sterilizing dishes, disinfecting bath tubs and deodorizing toilets and garbage cans. It is a powerful disinfectant, and a cheap one as well, for the cost is about a cent per gallon and at working strength only a fraction of a cent per gallon.

For use in hospitals the electrolytic sodium hypochlorite, in addition to its application for bleaching and sterilizing

linens, is said to have many other advantages. It possesses extraordinary high germicidal action. This germicidal action, tested against organisms under the conditions of the Walker-Rideal test, may be calculated from the experiments of Klein, Sommerville, Walker and Rideal and others. With a chlorine concentration of 1:20,000 it is as active as one per cent phenol, and of course, it is much cheaper. For this reason it may be used freely about the wards and on the floors. At a dilution of 1:1,000 when used on floors there will be a great reduction in the number of organisms. Furthermore, the wards will be fresher, cleaner and freer from objectionable odors. In enteric and dysentery wards the electrolytic hypochlorite when placed in bed pans before use will have a marked deodorant action. It is a true deodorant and because of its cheapness may be used freely.

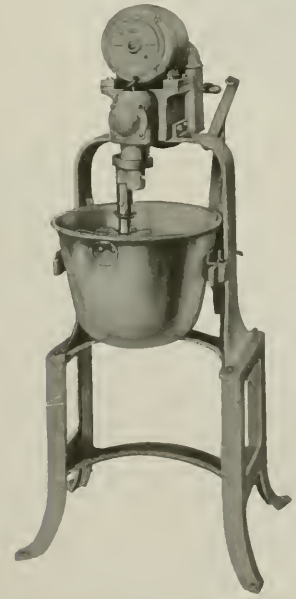
Because the hypochlorite is in a practically neutral state as it leaves the cell, it may be utilized for making Dakin's solution. It has been thus employed in the Rockefeller Institute with great success.

There are many other uses for this solution, such as deodorizing garbage cans, toilets and urinals; sterilizing drinking cups, dishes and kitchen utensils; prevention of bacterial molds, etc.

The equipment is supplied in varying sizes and capacities.

NEW FOOD MIXER MEETS NEED

A new food mixer has recently been introduced which seems to fill a gap in labor-saving kitchen equipment and which will meet most of the requirements of the kitchen in the small or medium size hospital while in the kitchens



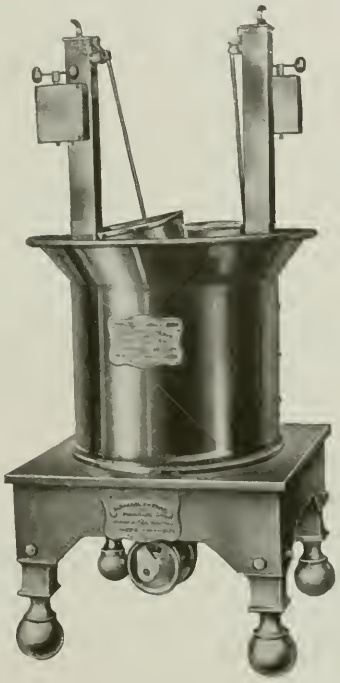
of larger hospitals it will supplement the work of large machines and meet emergency requirements.

This new food mixer is supplied with a 24-quart mixing bowl, and can be operated at two speeds with a convenient gear shift. The outfit stands fifty-five inches high, but occupies a floor space of only twenty-four by twenty-three inches. While substantially constructed, it is light enough to be moved about without difficulty. It can be supplied either with or without the floor stand shown in the accompanying illustration.

The motor supplied is a heavy duty one-quarter horsepower and is supplied for all commercial currents. When desired a food chopper can be furnished with the equipment.

NEW PORTABLE EGG TIMER

Hospital executives will be interested in a new type egg timer which can be used readily either with electricity, coal or gas. The egg cooker is a heavily spun nickelplated copper container. Two-egg baskets are fur-



nished, each basket holding from three to five eggs according to their size. The machine can be regulated at half minute intervals so that eggs can be boiled from one-half minute to six minutes, at which time the basket of eggs is automatically lifted from the boiling water.

The illustration shows the egg timer mounted on a special electric hot plate. This hot plate is made of heavy cast iron, nickel-plated, and it consumes a maximum of 1,500 watts. The top is twelve and a half inches square, the hot plate proper being eight and a half inches in diameter. A three-heat switch controls the current and insures economy by limiting the current consumption to the cooking requirements.

One feature which makes this device particularly suited to the diet kitchen is the fact that the hot plate can be used independently for many of the minor cooking operations necessary in a ward kitchen.

OUTSIDE-INSIDE BED PROVIDES OPEN AIR SLEEPING FACILITIES

ONE of the vexing problems in designing hospitals and sanatoriums is the provision of ample fresh air sleeping facilities for patients. While this problem is encountered in general hospitals, it is particularly pertinent in tuberculosis sanatoriums.

In the ordinary type of general hospital, fresh air facilities are obtained by means of solariums, open porches and roofs. The common practice is to wheel the patient in a bed or reclining chair to the space provided and then return him to his sleeping quarters for the night. It is readily apparent that such a method not only increases the necessary size of the hospital but adds a considerable amount of work for the attendants. Furthermore, it necessitates frequent exposure of nurses and attendants who must pass from the heated interior to the porch or roof. In hospitals devoted to the care of the tuberculous provision is frequently made in the design of the building for the patient to sleep virtually in the outdoor atmosphere or the same result is accomplished through the use of small cottages or tents.

A unique invention which has been recently perfected apparently goes far towards solving the question of open air sleeping facilities. It consists of a compartment unit which may be utilized separately or as a series of several unit compartments. It may be adapted for use in any building as a unit to be added at a window opening, or to form an open air ward on the flat roof. It can also be utilized in new buildings as an integral part on any floor.

The invention consists of a novel arrangement by which the patient can enjoy all of the facilities of a comfortable, warm interior, yet by a single operation in which the bed is not moved, be placed in the open air. A window extending the length of the bed closes over it at an angle of perhaps 45 degrees. When it is desired that the patient be outdoors an attendant or possibly the patient himself, raises the window, pushes its lower part in and

Fig. 1.

Fig. 2.

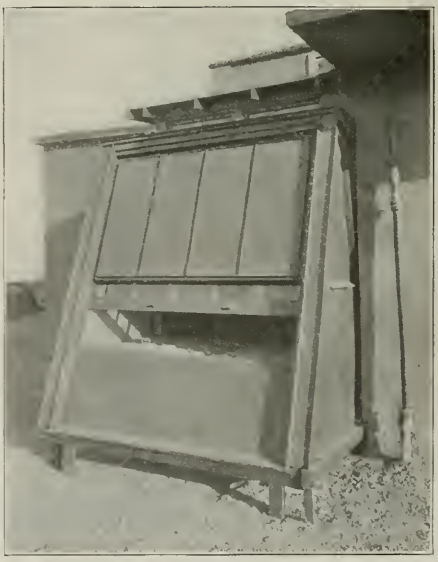


Fig 3.

across the bed, and closes it again. This leaves the window on the inside of the bed and the patient in the open. So when the window is closed on the outside, the bed and the room occupied by it are a part of the interior, and when the window is swung across and closed on the inside the space occupied by the bed is practically outdoors. The window being closed between the bed and the interior of the building keeps the cold air out and maintains the temperature of the interior at a comfortable point so that the attendant or nurse is not subjected to exposure.

ment unit apparently on the flat roof of a building with the window entirely closed on the outside. Fig. 2 shows the same compartment from the inside with the window completely closed. In Fig. 3 the compartment is shown with the lower part of the window raised preliminary to transforming the bed into outside sleeping quarters. With the window thus raised the patient is protected in case of storm, but still obtains ample fresh air. From this position the attendant or patient is able to swing the window across the bed upon the track provided for this purpose, exposing the bed and the occupant to the open air as shown in Fig. 4.

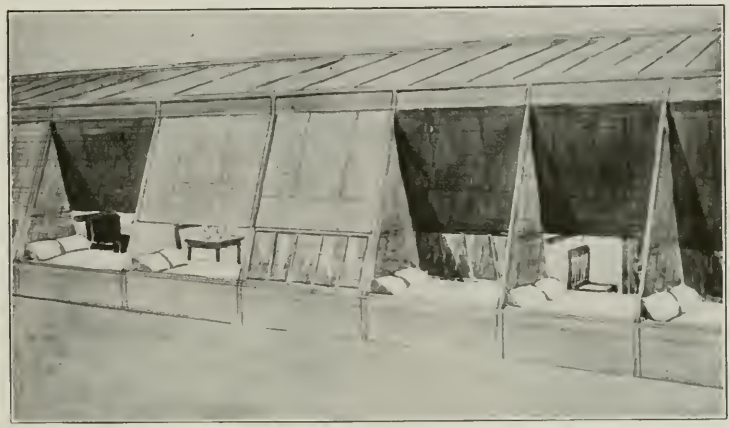


Fig. 4.

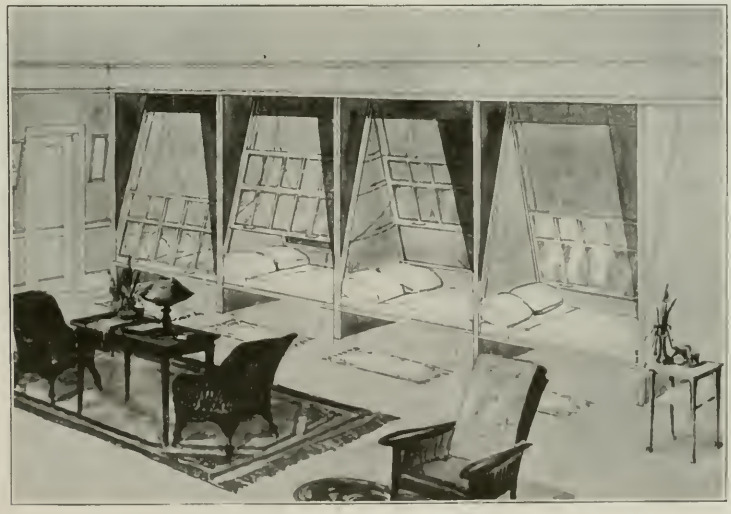


Fig. 5.

In established hospitals this new device will permit the flat roofs of the buildings to be utilized as open air wards at a minimum of expense and without materially increasing the strain on the walls.

Perhaps a better idea of the device can be obtained by referring to the illustrations. Fig. 1 shows a compart-

A series of compartment units arranged as open air ward is shown in the architect's drawing in Fig. 4. This illustration shows the varying arrangement of the window by which some sleeping compartments are completely

opened and others merely have the windows raised.

A section of the interior arrangement of the open air roof ward, showing particularly the interiors of the compartments is illustrated by the drawing in Fig. 5. Here again it is possible to see the several arrangements. In

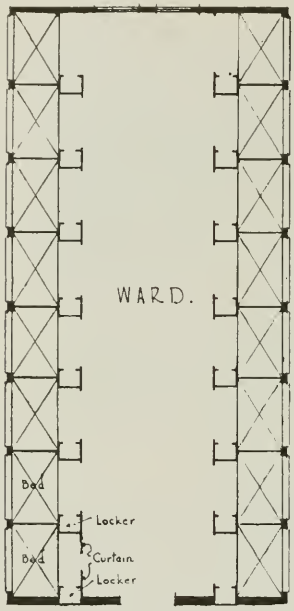


Fig. 7.

the first compartment to the right, the window is closed completely on the outside; in the second compartment it has been raised ready to swing across the bed on the course marked by the arrow. In the third compartment the bed is virtually outdoors as the window has been swung across and partially closed. As is indicated in the drawing, the central space in such a ward can be utilized as a lounging or reading room for convalescents.

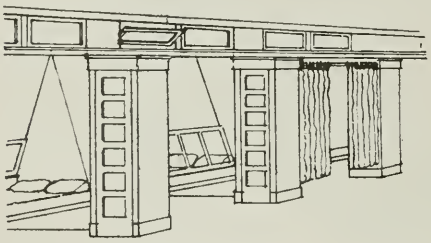


Fig. 8.

These rough drawings give an idea of the possibilities of this sectional system of sleeping compartments. Modifications can readily be made and private dressing rooms, lockers and other features added to the arrangement.

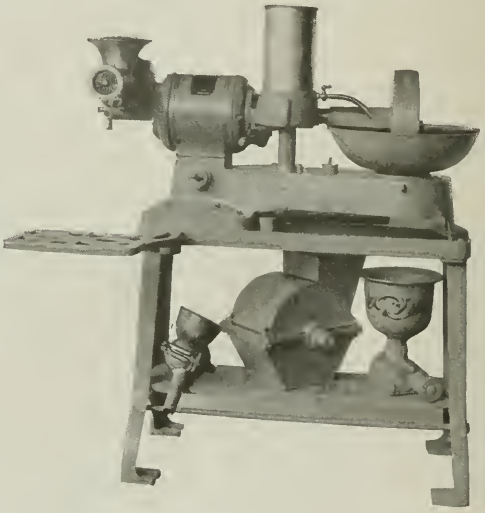
Fig. 7 shows a simple floor plan of an open air ward with the bed units along each side. It is noted that in this plan locker space is provided and privacy is afforded by means of curtains across the opening. A further detailed drawing in Fig. 8 shows such an arrangement with lockers indicated and with the curtains drawn in front of one of the compartments.

Not only does it seem that this invention would afford a ready means of open air facilities, but that it would accomplish this through the use of a minimum amount of space and with full protection for nurses and attendants. The further fact that a simple ward of this kind can be economically erected on the roof of any institution will undoubtedly arouse the interest of hospital executives and architects.

A "JACK-OF-ALL-TRADES" FOR THE KITCHEN

A new kitchen machine with such a wide range of usefulness that it has been dubbed a "jack-of-all-trades" in the kitchen has recently been introduced to eastern hospitals. The new machine is entirely automatic and because of its wide adaptability will save considerable labor in small and medium-sized hospital kitchens.

This machine, called The Kitchen Mechanic by its maker, besides chopping meats and vegetables, furnishes an automatic mayonnaise mixer, a meat grinder, horse radish grater, peanut butter mixer, coffee grinder, and



a cheese and a cocoanut grater. In addition an attachment is supplied for grinding knives and cleavers; a pulley is likewise furnished for driving a separate ice cream freezer and bread crumber.

A feature claimed for the machine is that in chopping meats and vegetables it actually cuts and does not crush or mash, a difficulty found in many equipments.

This machine is substantially constructed, easily kept clean and economical of operation. It is furnished either for table use or with floor stand as shown, and occupies a space about thirty-nine by seventeen inches. The chopping bowl is fifteen inches in diameter.

Meetings, Conventions and Conferences

HOSPITAL EXECUTIVES OF THE NEW ENGLAND STATES UNITE TO FORM ASSOCIATION

ORGANIZATION of the New England Hospital Association was affected and application made for recognition as a geographical section of the American Hospital Association at a meeting of hospital executives held on December 7 at the Boston Medical Library. Representatives were present from each New England state when Dr. John M. Peters of the Rhode Island Hospital at Providence called the meeting to order.

Following the acceptance of a constitution and by-laws, officers of the new association were elected. They are: Dr. Joseph B. Howland, Peter Bent Brigham Hospital, Boston, president; Miss Rachael G. Metcalfe, R.N., Central Maine General Hospital, Lewiston, vice-president; Dr. Nathaniel W. Faxon, Massachusetts General Hospital, Boston, treasurer; Dr. John M. Peters, Rhode Island Hospital, Providence, trustee for four years; Dr. Louis A. Sexton, Hartford Hospital, Hartford, Conn., trustee for three years; Miss Ida F. Shepard, R.N., Mary Hitchcock Memorial Hospital, Hanover, N. H., trustee for two years; and Dr. Thomas S. Brown, Mary Fletcher Hospital, Burlington, Vt., trustee for one year.

Dr. A. R. Warner, executive secretary of the American Hospital Association, addressed the meeting explaining the plan of geographical sections as developed by the American Hospital Association. He proposed that the formation of a New England Hospital Association be considered in the light of the following principles:

1. That there be strictly common basic viewpoints and interests in the emphasized activities and no real conflicts in any activity of the organization.

2. That the organization fill a definite need not within the legitimate scope of any other organization and promptly develop positive usefulness.

3. That the plan shall in advance convince all of the groups it aims to unite that the organization will properly represent and promote their views and their interests.

Because of the greater number of hospitals in Massachusetts, together with the centrally located situation as regards the rest of New England, Dr. Warner felt that the Massachusetts representation would quickly overshadow, out-vote and control the activities of such a New England Hospital Association, to such an extent as "eventually to leave a New England Hospital Association in name and a Massachusetts Association in fact." He submitted the following plan:

"Each New England state should form a state hospital association to become a separate association and as soon as fully organized become a separate geographical section of the American Hospital Association.

"There should be formed a correlating and central body known perhaps as the New England Hospital council formed by two or three delegates from each state association to correlate and promote the organized hospital activities of all the New England states; also to represent and to transact such business for each and all of the associations as shall be delegated to it. The council should elect its own chairman.

"A joint annual meeting of the Associations of all the New England states should be held somewhere in New England under the auspices of one of the state associations. The officers of this association should prepare the program and preside over the general sessions. This meeting would be known as the annual convention of the New England Hospital Associations.

"The time and place of each annual convention and the selection of the association to assume responsibility therefore should be determined by the council. Any expense of the meeting could be assessed by the council on the associations in proportion to their membership.

"At each annual convention there should be separate meetings of each association under its own officers to discuss satisfactorily the specific problems of each state as well as joint sessions for the discussion of topics of common interest and bearing.

"This plan of organization would not only avoid all the difficulties of the other but give additional advantages. The principal object of the association would be assured a greater success. More people would be attracted to the annual convention especially from states other than Massachusetts."

The plan submitted by Dr. Warner was thoroughly discussed by the members present.

Legislation in Connecticut

Dr. Sexton, former president of the Connecticut State Hospital Association, gave a short review of the reasons for the formation of the Connecticut Hospital Association, and some of its accomplishments in the legislative field. The association was able to bring about the passage of a bill making it necessary for a patient leaving a hospital to satisfactorily adjust his hospital account before leaving, he declared. This bill was drawn upon the same principle as the legislation previously passed to prevent the jumping of hotel bills. The second bill passed as the

result of Connecticut association's activities, was one making workmen's compensation insurance companies pay the full cost of board of patients. Previously the insurance companies had been charged at the regular rate charged to charity patients, which rate was usually lower than the actual cost of caring for such patients.

Representatives from the various states were called upon to express their opinion regarding the advantages of the formation of a New England Hospital Association as compared with the advantages of the formation of separate state associations. Speakers from Maine, New Hampshire and Rhode Island stated that in their opinion it was doubtful if any state organization could be formed in their states.

Mr. George T. Chaffee of Vermont announced that the Vermont hospitals had already completed the formation of a state association which he thought they would not wish to give up. As to the reception of the New England Hospital Association in Vermont, he was unable to say.

Dr. Washburn summed up the discussion in favor of the original plan for organization by the following points:

"1. State lines in New England are not as sharp as in other sections of the country and while the plan proposed by Dr. Warner seems better suited to all other sections it is quite possible that the original plan will be successful in New England.

"2. The New England Hospital Association can be formed and made active at once and Dr. Warner's plan would take time to accomplish.

"3. If the New England Hospital Association does not prove an unqualified success, or if for any other reason it seems desirable, the plan proposed by Dr. Warner can at any later time be put into operation through the existence of the New England Hospital Association more easily than now."

It was finally voted that the body was in favor of forming a New England Hospital Association and that it be affiliated with the American Hospital Association as a geographical section. The chair was then authorized to appoint a committee to bring in recommendations for a constitution and by-laws and a nominating committee. The meeting was then adjourned.

Luncheon was served on the first floor of the medical library, and a very pleasant hour was spent in renewing associations with old acquaintances and making new ones.

In the afternoon meeting the constitution and by-laws submitted were read and accepted.

By motion unanimously adopted it was made a policy of the New England Hospital Association to keep its qualifications for membership at all times identical with the qualifications for personal membership in the American Hospital Association.

Application has been formally made to the American Hospital Association for admission as a geographical section.

MICHIGAN HOSPITAL ASSOCIATION HOLDS FIFTH CONVENTION AT FLINT

HOSPITAL accounting, staff organization, food service, diagnostic clinics and the relation of the small hospital to the health problems of the community were some of the principal topics discussed at the fifth meeting of the Michigan Hospital Association held at Durant Hotel at Flint on January 18 and 19.

After a brief word of welcome from the representative of the mayor of Flint, Dr. Stewart Hamilton, acting president of the association, introduced Dr. Henry Vaughan, health commissioner of Detroit, who spoke on "The Relation of the Small Hospital to the Health Problems of the Community." Dr. Vaughan outlined the growth of the organized public health movement in this country and England from the middle of the last century, and indicated that today the education of the doctor has in many instances outstripped the facilities provided for him in order to reach the highest degree of efficiency in the practice of his profession. Dr. Vaughan felt that hospitals should provide the qualified physicians of their community with adequate x-ray and laboratory facilities, that there should be a minimum of interference in the relationship of the patient and his family physician, and that the hospital should be a place where a physician would have access to facilities that would keep him in the forefront of his profession. He felt that small hospitals properly equipped could make a distinct contribution toward lowering the morbidity and death rate of the community and prolonging life.

The remainder of Wednesday afternoon's session was devoted to a discussion of hospital food problems, under the chairmanship of Miss Rena Eckman, household director of the University Hospital at Ann Arbor. The first of the four papers on this general subject was read by Miss Ella M. Eck, dietitian, Blodgett Memorial Hospital, Grand Rapids, on "Food Service in Hospitals." Miss Eck pointed out that the first essential in giving good food service in a hospital is of course good food, not necessarily expensive, but wholesome. The sense of taste is not the only one to be considered; sight is of quite as much importance, since a patient will sometimes refuse to touch his tray if it does not look attractive. Secondary to the food but still of great importance are the trays, linen, silver and china, and Miss Eck declared that a definite plan of setting trays with an appointed place for each article adds greatly to their appearance and decreases the time spent in serving.

Technique in Handling Food

Discussing the question of where dishes should be washed, Miss Eck argued for a central room provided for this purpose; in her judgment, it eliminates duplication of effort, saves time, requires fewer employees and lessens the noise on the various floors.

Whether it is desirable to do part of the cooking in small diet kitchens depends, in Miss Eck's judgment, on the kind of food that is being served, the distance of diet kitchens from the central kitchen, and their location in relation to the wards and patients' rooms.

"In working for professional service," said Miss Eckman, "we are emphasizing more and more individual service, considering not only the diet prescribed for the particular ailment of the patient but also his preferences in the selection of the food and its method of preparation. Patients on restricted diets may be made much happier and more responsive to treatment if a little more time and care are spent in the preparation of their diet. This is the particular job of the dietitian, and to handle it successfully she must have the cooperation of doctors

and nurses and must use all the tact and ingenuity at her command."

Dr. Babcock urged hospitals to get away from the routine method of serving food, a method which necessitates handling it once and sometimes twice too often. By serving food from portable steam stables it is possible to omit the handling of the food in the pantry and at the stationary steam tables, a practice which, in his opinion, is at best often mussy and results in the loss of heat.

Dr. Albert D. Wickett, assistant professor of internal medicine, University of Michigan, read a very scholarly paper on "The Medical Point of View" with reference to dietetics and dietotherapy, in which he dwelt in some detail upon the dietary treatment of diabetes, nephritis, obesity, tuberculosis and typhoid fever. He contended that dietotherapy, to be successfully used, must be based upon fundamental laws and facts. Miss Dorothy M. Stewart, special dietitian, University Hospital, Ann Arbor, described the system of diets for the treatment of diabetics used at that institution.

The concluding paper of this session was devoted to a discussion of the place of nutrition work in a hospital dispensary. Its author, Miss Esther M. Funnell, social service dietitian at Harper Hospital, Detroit, said that in the present-day vernacular "nutrition" has come to be used synonymously with the word "health," especially as applied to the child. She quoted Dr. Ira S. Wile as saying: "We now speak of nutrition as an index of health. Good nutrition is the equivalent of good health and malnutrition is the equivalent of ill health." Miss Funnell contended that every hospital dispensary should include in its plan for development ample supervision for the establishment of nutrition work. This work, however, should not be confined to the organization and conducting of nutrition classes for children, she declared, for in the dispensary, as in the hospital itself, there will not infrequently come cases of diabetics, nephritis and obesity which will require dietetic supervision. The person appointed to this work must therefore be at once a nutrition worker and a dietitian; her training for this undertaking should consist of at least a four-year course in an accredited school of home economics; she should also have a thorough knowledge of food values, cookery and dietotherapy, as well as some training in social service work. Miss Funnell felt that many dispensary patients can be cared for in groups and pointed out that at the present time there are a number of dispensaries featuring diabetic clinics. Massachusetts Hospital in Boston, for example, has a diabetic clinic, attended by 200 patients, and the department reports splendid success, she asserted. At the dispensary of the Lakeside Hospital in Cleveland, moreover, there is a similar clinic, composed largely of discharged hospital cases, who report regularly to the diabetic clinic for supervision.

The organization of a dietetic department in a dispensary is not without its difficulties. The dietitian will often encounter indifference on the part of the physician who has worked for years without such a department, and in many cases she will have to begin in a small way and justify not only the work itself but its growth. Miss Funnell pointed out that it is of the utmost importance to a dietitian doing dispensary work to have a demonstration room where she can give actual instruction in food preparation. The equipment of this room need not be expensive, as it should contain only such things as are essential to the preparation of food. The use of elaborate utensils in demonstrations will not help to meet the needs of patients when the modest equipment of their own homes is considered.

Before this session adjourned, Miss Rena Eckman made a brief statement regarding the results of a three days' study of plate waste in the dining rooms of the physicians, nurses and lay workers of a well known institution. Accurate figures were kept of the amount of food sent into the dining rooms, the amount reclaimed and the amount that was actually wasted. Here are some of the detailed figures:

	Percent		Percent
Bread	16	Pot roast	35.4
Cereal	4.5	Irish stew	11.2
Potatoes	34.7	Roast veal	14.4
Butter	7.4	Cold roast beef	31.2
Vegetables	6	Meat pie	11.1
Lamb	12.8		

In a study of the food waste in the wards it was found that this was even greater than in the dining rooms.

Wednesday evening's session was devoted to the discussion of the Sheppard-Towner bill by Mr. Fred M. Johnson of the Community Union of Detroit, in which he traced the genesis of the bill and its history in Congress, and indicated his interpretation of its provisions, particularly as they apply to the state of Michigan. He was followed by Dr. Olin, state commissioner of health, who spoke informally of the work of his department and the work recently assigned it of supervising hospitals connected with state penal and correctional institutions.

One of the most helpful sessions of the meeting was held on Thursday morning, at which time the problems of hospital accounting, staff organization in hospitals and diagnostic clinics were ably discussed.

Mr. Springer Discusses Accounting

After calling attention to the report of hospital forms and records submitted to the last meeting of the American Hospital Association at West Baden, Mr. Durand W. Springer, superintendent of the Homeopathic Hospital, Ann Arbor, analyzed several basic accounting principles. Among the points he emphasized were the following:

1. Before revising its bookkeeping system or inaugurating a new one, a hospital should first determine what information it will need. Bookkeeping is a method by which information is kept for future use, and unless the system is definitely planned it will be a patchwork.
2. Minimum requirements as to information.
   (a) Total number of hospital days.
   (b) Total number of out-patient visits.
   (c) Amount earned, whether paid for or not.
   (d) Cash receipts on earnings.
   (e) Net cash receipts other than on earnings.
   (f) Value of other than cash receipts.
   (g) Cash expenditures.
   (h) Value of expenditures covered by other than cash expenditures.
   (i) Average cost per capita per diem.
   (j) Average cost per visit.
3. Preparation of forms for recording information.
   (a) Use standard size blanks.
   (b) Avoid duplication of work by using carbon copies.
   (c) Do not try to develop all possible facts but make them available if needed.
   (d) Use loose leaf books or cards.
   (e) Place data on sheets or cards in such a way that they can be shuffled for every possible purpose.
   (f) Use specially ruled sheets or cards.
4. Minimum accounting record books.
   (a) Minute record.
   (b) Cash receipts and disbursements (special columns).
   (c) Cash payments and disbursements (special columns).
   (d) Purchase register.
   (e) Series of inventory sheets for cost record.
   (f) Patients' register, card record and patients' census record.
   (g) Earnings register.
   (h) General ledger.
   (i) Patients' ledger.
   (j) Journal and financial statement.
5. Fundamental accounting principles.
   (a) Entirely separate capital and operating accounts.
   (b) To income from operation add only net results of capital account.
   (c) Properly allocate both as to revenue and expense all interrelated items, so that correct comparisons can be established and statements of revenue and expenditure be made rather than statements of receipts and disbursements.
6. Capital accounts.
   (a) Corporation income.
      1. Endowments for capital expenditure (gifts).
      2. Rents.
      3. Sales of property.
      4. Miscellaneous, such as donations figured at cash value, subsidies, etc.

(b) Corporation expenses.
1. Salaries of officials and employes engaged in corporation work.
2. Legal expenses.
3. Expenses incurred in raising funds.
4. Interest on loans.
5. Miscellaneous.

7. Minimum operating accounts.
(a) Income.
1. Board of patients and special nurses.
2. Operating room, delivery room and anesthetics.
3. Laboratory, x-ray and clinical.
4. Pharmacy, medical and surgical supplies, dressings and optical goods.
5. Miscellaneous, such as fees collected from doctors.
[To this should be added (a) receipts from out-patient visitors and (b) net corporation receipts. The result will be the total institutional income.]

(b) Expenses.
1. General.
(a) Administrative.
(b) Housekeeping, including laundry.
(c) Maintenance and repair.
2. Professional.
(a) Medical services.
(b) Nursing services.
(c) Attendings and orderlies.
(d) Pharmacy, medical and surgical supplies, dressings and optical goods.
(e) Laboratory, x-ray and clinical.
(f) Social service.
(g) Dietetics.
[To this should be added the expenses of the out-patient department. This will give the total institutional expenses.]

Following Mr. Springer's discussion of hospital accounting, Father Michael P. Bourke, St. Joseph's Sanatorium, Ann Arbor, read a stimulating paper on staff organization in small hospitals, which THE MODERN HOSPITAL will publish at an early date.

Limit Size of Diagnostic Clinics

Speaking on the subject of diagnostic clinics, Dr. Plinn F. Morse, director of the diagnostic clinic, Harper Hospital, Detroit, said that medicine as it should be practiced today is exceedingly complex; since it is so complex, it is exceedingly expensive, and the physician of moderate means cannot provide himself with the necessary diagnostic and therapeutic facilities. Dr. Morse felt that state medicine, with the panel system, as it now prevails in England, is the result of a lack of well-rounded practice at reasonable prices. The medical profession has failed in delivering economical medical treatment to the rank and file. As a result we have the organization of health clinics at community centers, the practice of medicine on the part of university schools of medicine, the holding of obstetrical and heart clinics by local board of health. To assist in alleviating this situation, the diagnostic clinic of Harper Hospital was started. The clinic is activated by a belief that the family practitioner is needed for the well being and happiness of families and that no system which pretends to displace the family physician, who should be a friend as well as a technical adviser, will be a success; that the family physician cannot be what he should be because he has not adequate facilities, and that the cost of delivering good medical service is more than most people can pay for getting this service to them. Since some ninety per cent of our population cannot pay for the type of service which the development of modern medicine makes necessary, they are in most instances obliged to do without it. The diagnostic clinic at Harper Hospital accepts patients only from physicians; it does not short-circuit the public to the hospital. The clinic returns patients with findings. Absolutely no treatment is given in the clinic; this must be given by the referring physician. Dr. Morse felt that the diagnostic clinic should not be large, and Harper Hospital plans to take care of between forty and fifty patients a month.

Hospital Privileges to Osteopaths

On Thursday afternoon a round table discussion was conducted by Dr. W. L. Babcock. One of the questions discussed was whether osteopaths should be allowed to send patients to a private room in the hospital and give treatment there. The general feeling was that they should not be granted this privilege. Some of the delegates thought it all right to allow osteopaths to refer patients to the hospital, but that once admitted, the patients should pass out of their control.

In response to the question "Should relatives of patients be admitted to the operating room?" Dr. Munger said that he had recently put this question to heads of ten or twelve leading hospitals of the country, seventy-five per cent of whom replied that they did not allow visitors on the operating floor. A few hospitals refer requests of this character to the operating surgeon. Dr. Babcock said that relatives were not admitted to the operating rooms of his hospital except in certain instances where children were to be operated upon. He observed that if relatives and friends are admitted to the operating floor it is hard to keep them away from the operating suite.

In discussing the question of the employment of nurse anesthetists to the exclusion of interns, Dr. Babcock said that only nurse anesthetists are used at his institution, and that interns are allowed to anesthetize only so far as is necessary for their training. It was pointed out that the superintendents of small hospitals, in an effort to employ nurse anesthetists, meet with objections from the family physician, who is anxious to secure the fee for administering the anesthetic.

Retirement of Surgeons

In discussing the question of the retirement age of surgeons, Dr. Smith, superintendent of Michael Reese Hospital, Chicago, who happened to be in town, said that his institution has three classes of physicians, namely, attending, associate and adjunct, and that the attending men are retired to the position of senior attending at sixty years of age, or after twelve years of continuous service, irrespective of their age. As senior attendings they have the privilege of sending their patients to the private rooms of the hospital and to teach on the wards. At seventy years of age they become consulting surgeons, after which they merely have the privilege of sending their own patients to the private rooms of the hospital. Dr. Hamilton said that it is the practice of Harper Hospital to retire its surgeons at the age of sixty-three years, irrespective of the class to which they belong.

In answer to the question as to whether the time has now arrived to reduce room rates and other hospital charges, it was said that Grace Hospital, Detroit, had on the first of October, 1921, reduced its charges for x-ray and laboratory service twenty-five per cent. It was generally felt that rates should come down as costs come down, but that some hospitals would be justified in maintaining their rates in the face of lowering costs, because when costs went up during the war they did not increase their rates with the same rapidity.

MISSOURI TO ORGANIZE

The Missouri Hospital Association will meet at St. Louis on February 10 to form a permanent organization, according to an announcement sent out by Dr. Rush E. Castelaw, Christian Church Hospital, Kansas City, secretary of the preliminary organization. The day will not be spent at a formal program, but hospital workers will meet together to become acquainted, visit hospitals of the city and hold a business session. Dr. A. R. Warner, executive secretary of the American Hospital Association, will be present. Dr. Louis H. Burlingham of the Barnes & Children's Hospital, St. Louis, is temporary president.

DISPENSARIES AND OUT-PATIENT DEPARTMENTS

Conducted by MICHAEL M. DAVIS, JR., Ph.D., Executive Secretary Committee on Dispensary Development, United Hospital Fund of New York, and Chief, Service Bureau on Dispensaries and Community Relations of Hospitals, American Hospital Association, 15 W. 43rd Street, New York
and by ALEC N. THOMSON, M.D., Director of Medical Activities, American Social Hygiene Association, 105 W. 40th Street, New York

THE RELATION BETWEEN THE OUT-PATIENT DEPARTMENT AND WARDS

TENTATIVE RECOMMENDATIONS PREPARED AND SUBMITTED FOR GENERAL CRITICISM BY DR. GERTRUDE E. STURGES, ASSOCIATED OUT-PATIENT CLINICS, NEW YORK CITY

UNTIL recently the out-patient department was considered a very unimportant branch of any hospital. Most hospital trustees and administrators and many physicians still fail to appreciate the importance and magnitude of out-patient service. "The dispensary has too often been treated as a Cinderella in the hospital household; neither sufficient funds nor sufficient thought has been given to its organization and work."[1]

If the number of patients treated be a criterion of importance (and to the mind of the trustee, numbers have always been of importance), the dispensary should receive the highest consideration, as this department in large institutions treats from five to ten times as many patients as the hospital itself. The dispensary, with its much broader contact with the community, is giving a grade of service inferior to that given in the hospital and is constantly presenting the institution in a bad light to a large proportion of its clientele.

It cannot be the kind of patient treated in the out-patient department that accounts for the difference in attitude. The patients are often the same individuals, cared for during one phase of illness in the dispensary and during another phase in the hospital wards. Neither can it be the type of sickness that makes the distinction, because nearly all types of sickness are cared for in both departments. But the more serious and advanced stages of disease are treated in the hospital. This seems to be the explanation of its prestige. Accordingly we conclude that the failure to grant the same consideration to the out-patient department as to the hospital proper is that the patients cared for in the wards are more acutely ill than those cared for in the dispensary.

Ambulatory Cases Slighted

Sir James MacKenzie has pictured disease as consisting of four stages: First, the predisposing stage; second, the early stage; third, the advanced stage; fourth, the final stage. He says further that "medicine has advanced so far that for the study of disease after the patient has died we find institutions magnificently equipped, presided over by men of great experience and training; for patients suffering from the advanced stages of disease, we have great hospitals with staffs of skilled physicians, surgeons and specialists. If we seek to learn the facilities offered for the detection and cure of disease in the stage when it has not damaged the tissues, we discover that there is little consideration given to this aspect of the matter."

When we consider that "the chief aim towards which all endeavors should be bent, in medicine, is the prevention and cure of disease,"[2] shall we continue to provide excellent service for operative conditions and advanced illness and fail to secure at least as adequate service for these same conditions in their preventive and curative stages? And if it has been worth while to provide high grade hospital care during the more serious phases of disease, is it not worth while, then, to follow the treatment to completion by the best type of dispensary service?

Do not chronic diseases, such as heart trouble and nephritis, produce hardship and death as well as the more spectacular and dramatic pneumonia and appendicitis? Why should a better type of care be provided for the latter conditions? In other words, is there any real reason for giving scientific and humane care to patients when they are bed-ridden and much less careful treatment while they are still ambulatory?

It is keenly felt by thinking physicians and teachers that the patients' care should be of a similarly high grade through both out-patient department and wards; moreover, that the treatment provided, as well as the opportunity to study the case, should be continuous and consistent.

No Continuity of Medical Care

Not only has there been failure to provide high grade dispensary service, but the lack of continuity of treatment between out-patient department and wards has been and still is not only a flagrant source of waste of medical service and educational opportunity but a serious deterrent to the most rapid and satisfactory cure of patients.

Because there has been little liaison between dispensary and hospital staffs, and even less transfer of information regarding the previous care of patients in other departments, the medical care of patients transferred between wards and out-patient department has been anything but consistent and continuous.

Patients sent from the out-patient department to the

1. E. H. Lewinski-Corwin, Ph.D.: The Dispensary Situation In New York City, Medical Record, January 31, 1920.

2. Sir James MacKenzie, "The Future of Medicine," page 1.

wards are often treated by a different physician, one who knows nothing of what the dispensary treatment has been. Waste of time and duplication of effort result. The patient has gained confidence in the physician who has cared for him previously, but now must become used to another personality; he has been cross-questioned and examined several times before, but all this must now be repeated. The physician who cared for the patient in the dispensary and who has become interested in the case has made a tentative diagnosis and referred the patient to the hospital. He is eager to know the subsequent history of the case, to see "the dispensary diagnosis confirmed or refuted, it may be by operation or at the autopsy table."[1]

There is a tangible loss of money in duplication of laboratory service, but there is a much greater intangible loss in lack of continuous and effective medical care and in the lack of enthusiasm if not the actual dissatisfaction of the out-patient staff. This lack of cooperation between wards and dispensary is usually more wasteful in chronic than in acute conditions, because for chronic cases the care in the previous department has usually been of longer duration.

Why Service Attracts Physicians

Dr. Alexander Lambert says, "I think you will agree with me, that the necessity and value to the patient and to the doctor of a close cooperation between the wards and the dispensary, varies in its necessity in different services or, more particularly, varies in the value obtained in certain such instances as in cardiac cases, in tuberculosis, in children's diseases, where the varying developments need supervision. In short, in cases which the chronicity of disease or the continual supervision of existence requires close attention, it is of greater necessity and value than in the ordinary varying acute ailments of general practice or surgery."

Why do physicians seek service in out-patient departments, and why do many continue to serve there, year in and year out, under uncomfortable physical conditions, poor administration, with inferior laboratory, clerical, nursing, and social services, inadequate equipment, and almost complete lack of appreciation of their service?

What they seek in out-patient service is educational opportunity, more often in a specialty, and professional advancement. There are some altruistic souls who are eager to serve humanity and therefore glad to give their time and energy with no hope of reward, and we know there are some materially minded and unscrupulous individuals who use their out-patient service for "buncosteering" (referring dispensary patients to private offices), but the large majority of physicians work in the dispensary for what they can learn and in order to get a foot on the ladder up.

Making It More Attractive

Physicians' work in out-patient departments is in a large majority of institutions entirely gratuitous. How are the hospital trustees to reward them and attract them to prompt and faithful service, if not in the kind of compensation which they appreciate most? The children's medical service at Bellevue Hospital recognizes this principle as fundamental: "The out-patient department shall be organized so as to be of the greatest possible interest to the men working in it."[2] The maximum opportunity for learning for the out-patient staff requires complete liaison between the hospital wards and the out-patient department; the attendance of the senior hospital staff in the out-patient department for supervision and instruction; the opportunity for dispensary physicians to follow cases into the hospital, to study and report on series of cases, to attend hospital rounds and case conferences; and a unification of the hospital and dispensary record systems.

In order to get a complete picture the physician "should watch the progress of the patients from the time they first apply to the dispensary until they are either 'relieved by art or released by death.' The student cannot get a proper perspective of disease if his acquaintance ceases when the patient leaves the out-patient department for the ward or if it be first made in the operative theater or afterwards."[3]

In order to be able to do scientific and instructive medical work in the dispensary, a more reasonable ratio of patients to physician, than is now the custom, is essential. It is obviously impossible for one physician to give anything like adequate service to thirty or forty patients in two hours, and even more hopeless for him to attempt a scientific work-up of cases under such pressure. Limitation of patients or increase of staff, or both, will be necessary to make possible a reasonable service to patients and a reasonable opportunity to study their cases to physicians. But limitation of patients is a difficult question of administration. An increase in dispensary staff is also difficult for most institutions to achieve. Physicians are not seeking the ordinary dispensary service at the present time, chiefly because of the lack of opportunity for learning and professional advancement and also because of the counter-attraction of paid positions in industrial medicine, insurance work, etc. As was recently remarked, in the course of a discussion in the New York Academy of Medicine on this very subject, "It is no longer the clinical assistant that is on probation; it is the hospital."[4]

Reward for Dispensary Service

Has the young physician a right to expect professional advancement in return for dispensary service? It would seem reasonable for him to expect that association with the senior men of his service would yield certain prestige if not actual reference of practice; that through study of results of cases he should prepare papers for presentation at staff meetings and publication in professional journals; that he should be given preference, all other factors being equal, when vacancies in the hospital staff occur; that he should have the privilege of caring for his private patients in the hospital; that membership in a dispensary staff should yield him a certain amount of professional prestige and not be a stigma of failure.

To promote both educational and professional opportunity for the out-patient medical staff, to make it possible for them to render the highest type of service to patients, and to effectuate the service they do render, there are certain requirements in out-patient administration, non-medical service, and equipment, that are essential; such as prompt and accurate laboratory diagnosis, a follow-up system, social, nursing and clerical service, adequate space and equipment. All of the above involve more or less financial outlay, but the returns to the institution in superior service, increased efficiency and esprit de corps, have been found to justify the expense

1. Ralph B. Seem, M.D., Relation of the Dispensary to the Hospital, THE MODERN HOSPITAL, January, 1921.
2. Charles Hendee Smith, M.D., Recent Developments in Out-Patient Work. Transactions of Section on Diseases of Children of the A. M. A., 1919.
3. Essentials of Surgical Teaching, G. Grey Turner, M.D., Hon. Assistant Surgeon, Royal Victoria Infirmary, Newcastle-on-Tyne. Edinburgh Medical Journal, August, 1918.
4. The Evolution of a Children's Clinic, Frank Howard Richardson, M.D. Medical Record, July 24, 1920.

in those institutions where these factors of adequate out-patient service have been provided.

Improvement of Liaison

The improvement of liaison between hospital wards and dispensary, on the other hand, involves little financial expenditure except for transfer of records, but does require the hearty cooperation of the medical staff of the hospital. It is felt, moreover, that no more potent force for raising dispensary standards exists than just such unification of the in and out-patient departments as is outlined below.

As very little literature and research on this subject is available, it was thought wise for the Associated Out-Patient Clinics of New York City, a voluntary organization of representatives of the chief out-patient departments and dispensaries of that city, primarily interested in raising dispensary standards, to undertake a study of the existing procedures for relating the hospital clinics and wards and to formulate standards for such relationship.

Accordingly, a study was made of the existing procedure in nineteen large representative institutions, both special and general. This material was largely gathered by conference with hospital superintendents and in some instances with dispensary executives. Great variety of organization and procedure was found among these institutions, although in most there had been some attempt at liaison of medical staff, usually by having the junior members of the hospital staff act as clinic chiefs in the out-patient department. In most institutions, because of entire independence of staffs or rotation of service, there was no possibility of having patients seen by the same physician in the wards who had cared for them in the dispensary. The service of hospital attendings and their assistants in the out-patient department was not customary; dispensary physicians were given few if any privileges in the hospital; promotion of out-patient to hospital staff, although the rule in a few institutions, was far from being customary; the transfer of records between dispensary and wards, although ideal in one institution and satisfactory in several others, was meager or non-existent in the majority of cases.

A tendency to improve ward and out-patient department liaison was manifest; several institutions had reorganized recently or were undergoing a process of reorganization. No doubt the recommendations of the Public Health Committee of the New York Academy of Medicine, in its survey of dispensaries, has stimulated improvement along this line. Where well unified services exist, enthusiasm among the staff was manifest and appointments as clinical assistants were eagerly sought.

A study was also made of the method of relating wards and clinics in each of the different services of one large and highly organized institution. Here a great or even greater variety of procedure was found than in the nineteen institutions studied. One service was found to be almost perfectly unified, others to be moderately well linked up, but still others to be without any real staff liaison or record transfer; for although in all services one member of the hospital staff acted as chief of clinic, in some cases this clinic chief was on rotated service (six months in hospital and six months in dispensary, etc.), making his potential service as liaison officer to promote continuity of medical care, practically nil.

The physicians interviewed in this study were almost without exception fully aware of the wastefulness of the present system.

Having ascertained the various existing methods of relationship, an attempt was made to secure from competent sources opinions as to what the ideal linking-up of hospital wards and out-patient department should be. Accordingly seventy-five representative physicians active in dispensary service were interviewed. In some instances these men were hospital attendings or directors of service, but in most cases they were of the grade of clinic chief. These physicians were invariably found to be keenly interested in this subject and many of them had valuable constructive suggestions to offer.

With the material so gathered as a basis, tentative recommendations for the relationship of hospital and out-patient department to promote continuous and consistent medical care of patients have been drawn up, as follows. These recommendations have not as yet been formally adopted by the Associated Out-Patient Clinics and before adopting and promulgating them, the Association invites detailed criticism from both professional and administrative points of view. Your comments and your criticisms will be welcomed by Michael M. Davis, Jr., executive secretary, Associated Out-Patient Clinics, 15 West 43rd Street, New York City.

Tentative Recommendations

Unified Organization.

Hospital and out-patient staffs should constitute one organization.

All members of the staff should serve in the out-patient department. The service of the seniors[1] should be at least one day a week.

Definite duties in the hospital should be assigned the entire clinical staff. In the case of juniors[2] these may consist in following certain types of cases through both dispensary and wards, in making reports on series of cases, etc.

The entire staff should have hospital private room privileges, whenever possible.

Each hospital should publish the names of the entire staff, at least once a year, in the annual report or other official publication.

Probation.

Official appointments to staff, annual or permanent, should ordinarily be given only after a period of probationary service. It should be required that no physician should be permitted to work in a clinic unless holding either an official appointment on the staff or a temporary appointment as an unofficial or volunteer assistant. Appointment as unofficial or volunteer assistant should require at least the registration of the name and professional pedigree of the physician, and the length of time which any such unofficial appointment may be held should not exceed one year. At the expiration of that period, the privilege of working in the clinic should cease unless an official appointment to the staff is made.

Promotion.

Other things being equal, efficient out-patient service in a hospital should be reason for preference in promotion within the staff of that institution.

Continuous Service.

The director or responsible head of each service should be continuously in charge.

Wherever possible service in the wards and out-patient departments should be continuous and not rotating. A large enough staff should be appointed to make such

1. By "seniors," attendings and associate or assistant attendings are meant.
2. By "juniors," clinic chiefs and clinic assistants are meant.

service possible without demanding too much time of any one physician.

Medical Care of Patients.

The principle of continuity of care of the patient should be maintained. The patient should always be referred to the same division or section of service in the wards which cared for him in the out-patient department and, wherever possible, to the personal attention of the physician who cared for him in the out-patient department. The same principle should govern reference of patients from the ward to the out-patient department.

Staff Conferences and Study of Results.

Staff conferences for discussion of both ward and dispensary cases should be held monthly, at which the attendance of all members of the staff, including clinical assistants on probation, should be required.

Weekly rounds for all the staff of each service should be conducted.

The out-patient department should be so organized as to be capable of being used for careful study and diagnosis of obscure cases. For this purpose the organization of a diagnostic division is important.

Studies should be made from time to time of results of series of cases which have been treated in both out-patient department and ward. A cross-index of case histories by diseases is desirable in order to facilitate such studies.

Records.

A unified system of medical histories for hospital and out-patient department, with a single record room for both departments, should be the ideal to work towards.

Until such unification is brought about, a system of summarizing dispensary and hospital records, and referring summaries when patients are transferred between departments, should be adopted. Such summaries should contain notes on history, physical examination, treatment and laboratory examination.

Admission and Follow-Up of Patients.

So far as possible all patients should be admitted to the hospital ward through the dispensary.

Follow-up and after-care of all ward patients should be conducted through the out-patient department.

Interns.

The out-patient department provides opportunities for the medical education of interns that should be utilized. When interns are used in the out-patient department they should work under the instruction and supervision of staff physicians. Definite instruction should be given the intern by these senior physicians from the clinical material available in the out-patient department.

The service of the intern in the out-patient department should, when feasible, be simultaneous with service on the same specialty in the hospital.

Pupil Nurses.

When pupil nurses are used in the out-patient department the educational responsibility of the institution to the nurse should be considered in outlining their duties.

Definite instructions should be given the nurses from the out-patient clinical material.

Social Service.

Work done for a patient by the social service department should be continuous, whether performed in connection with the hospital or the out-patient department, and wherever possible the same worker should have charge of the case in both departments.

CORNELL UNIVERSITY OPENS PAY CLINIC

On November 1 Cornell University Medical College altered the plan of operation of its teaching dispensary which has been carried on for many years in the college building at 27th Street and First Avenue, New York City, and began to operate a pay clinic. A circular of information issued by the college announcing the clinic states that:

"The clinic is designed for those who cannot afford the fees charged in private offices, but who require expensive medical service, particularly of specialists; who do not wish to accept charity in an ordinary dispensary; who wish courteous attention, privacy and individual care. Admission will be limited according to this policy."

The public health committee of the Academy of Medicine of New York, after an extensive study of dispensaries in New York City completed about two years ago, called attention to the need of the middle class and recommended pay clinics for those wage earners and others of limited means who cannot afford to pay more than very limited sums for medical care. The committee on dispensary development of the United Hospital Fund of New York was organized as a result of the study made by the public health committee and is cooperating with the faculty of Cornell Medical College in this undertaking. An appropriation has been made by the committee to assist in meeting the deficit which it is expected will be incurred by the clinic during its initial month, and the committee is also furnishing advisory service of its staff in connection with the technical problems of organization and administration and the study of results. Pay clinics were initiated by the Boston Dispensary in 1913 and have since been established in a number of places such as in Cleveland and Chicago and in New York City in the Brooklyn Hospital, the Booth Memorial Hospital, the Neurological Institute and the Babies' Hospital Dispensary. The Cornell clinic, however, is a more complete and ambitious undertaking than any previously existing pay clinic. A fee of $1 a visit is charged patients, with medicines, supplies, x-rays, laboratory tests, etc., charged extra at cost. Patients unable to pay these fees are only taken in exceptional cases, as for teaching purposes. There are many nearby clinics of the free type, notably Bellevue Hospital and University and Bellevue Medical College, both of which are within one block, so that the type of patient previously attending the free Cornell dispensary can be referred to these clinics without hardship.

The clinic is open daily except Saturdays, Sundays and holidays from 1:30 to 4 p. m., and on two evenings a week from 5 to 7:30 p. m. Some special clinics are held in the morning.

May Become Self-Supporting

Clinics in the following specialties are held: general medicine, surgery, gynecology, urology, neurology, psychiatry, dermatology, syphilology, otology, rhinology, larngology, orthopedic surgery, ophthalmology, gastroenterology, endocrinology, protein sensitization and dentistry. A department of massage and electro-therapeutics is also provided. There is ample laboratory service both for clinical work and for research and a well-equipped x-ray department for diagnosis and treatment. The clinic is chiefly for adults but children are accepted in the specialties and a pediatric consultant is available for dealing with the general conditions of children who are under care in one of the special clinics.

The staff of the clinic includes ninety-four physicians. The heads of the departments of the Cornell medical

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faculty are available for consultation in the clinic at specified periods. The chiefs of clinics and their assistants are all recompensed for their clinic work on a salary basis. The teaching of medical students goes on in the pay clinic which takes the place of the former charity clinic conducted by the college. It is hoped that the income from the clinic will after a period be sufficient to meet the running expenses other than those which are properly chargeable to education and research, which it is not expected to cover.

A diagnostic clinic particularly designed for patients referred by private physicians has also been organized. A fee of $10 is charged for the examination in this clinic. This fee includes complete physical examination, routine urinalysis, Wassermann examination and hemoglobin estimation, reference to special clinics, and limited x-ray or other laboratory examinations. A report of the findings of this clinic, with recommendations for treatment, is prepared for the physician who refers the case. This service seems to have been appreciated by local physicians, for already it has been considerably utilized.

Health Examinations a Feature

For individuals who are not sick but who wish to have an examination to discover any existing defects or disease and to secure advice regarding personal hygiene a "health examination" is offered for which a fee of $2.50 is charged.

Every effort is made to limit the patients admitted to those who fall within groups for which the clinic is properly intended. A carefully devised plan of social and economic classification of patients has been adopted by the faculty through which consideration is given to the financial circumstances of the patient, the size and responsibilities of the family, and the probable cost of the medical treatment that is needed, and inquiry is made of each new patient to determine suitability. Patients unable to pay are ordinarily referred to one of the local dispensaries of the ordinary type. Considerable numbers of applicants, on the other hand, who are able to pay the fees of private physicians for the service required are referred to physicians in their vicinity. By vote of the faculty no such patients can be referred to or accepted by any member of the Cornell clinic staff.

Clinic Has Long Waiting List

One of the features of the clinic is the limitation of the number of patients admitted to each department so that the physician receives no more patients than can be dealt with in a thoroughly satisfactory manner in the time available. As a result of this policy, in the face of an overwhelming response on the part of the public to the opening of the pay clinic, hundreds of applicants have had to be turned away. Before the opening day there were approximately 350 applications on file. On no day up to the time of the preparation of this article (December 20) has the clinic been able to accept all of the applicants for treatment and there are on file over 900 applications from persons for whom appointments cannot yet be made. Patients are seen on return visits entirely by appointment and so far as possible new patients are also given appointments, as a measure of economizing time for both patient and clinic. During the first month of the clinic there were 6,488 visits of which about 3,700 were new patients. During the first half of December the number of visits was 4,621, an increase of some fifty per cent over the rate of attendance during the preceding month. Since, however, all the initial patients during the first weeks were new patients the physicians could not give proper care to nearly as great a number as will be practicable within the same time when the patients coming for return visits bear their usual ratio to the new patients.

Every department is provided with a clinic executive and with adequate nursing and clerical assistance. There is a central record system, all the records for each patient from different departments being assembled in one folder and filed in one place, sent thence when needed by ushers to the proper department.

HOSPITALIZATION OF THE SYPHILITIC

A plea for hospitalization of the syphilitic patient is made by Dr. Herman Goodman of New York in a recent issue of the Boston Medical and Surgical Journal. Dr. Goodman cites statistics which show that there are no facilities in New York City for the hospital care of the non-criminal syphilitic although that city sends each year approximately 1,000 cases to the state hospitals for insane, diagnosed paresis. Some provision has been made recently, Dr. Goodman states, for ambulatory treatment of syphilis but no hospital facilities have been added.

Conditions have materially changed since Fournier, father of modern syphilology, pointed out the defects of the hospital treatment of the disease and advocated the institution of dispensaries, Dr. Goodman declares in his article. The advances of the twentieth century, especially in specific arsenic chemotherapy, make it desirable to hope for a wider use of the hospital bed in the treatment of early syphilis.

Although it is admitted that facilities set apart for the syphilitic in civilian hospitals in general are inadequate, the syphilitic does occupy the hospital bed, even in those hospitals which do not admit the syphilitic per se, Dr. Goodman points out. The Presbyterian Hospital in New York reports that twenty-five per cent of the patients in medical wards have positive Wassermann tests practically diagnostic of syphilis. Other hospitals have similar records. Is it too far fetched, Dr. Goodman puts the question, to conclude that general hospitals refuse cases of active syphilis in the primary and secondary stages but welcome them for aneurism, tabes and other late symptoms of the disease?

A hospital that admits the active syphilitic, according to Dr. Goodman, is embracing the most gigantic opportunity in preventing and treating this most prevalent and chronic disease. The hospital bed, in selected cases, may make all the difference in the world between success and failure in the attack on the diseased individual, his family, associates and the whole community. The hospital that has admitted a case which subsequently shows a positive Wassermann or other evidence of syphilitic infection should treat the case for syphilis concomitantly with the other treatment if feasible, or prior to discharge for the primary condition causing admission. It will only be a short time, he predicts, before the spinal fluid examination will also be a routine measure for every bed patient.

Early eradication is going to result in a tremendous diminution of the prevalence of the infection and a drop in the death rate from chronic diseases dependent on syphilis in later life, to say nothing of the saving in the syphilitic miscarriages and early death. The temporary hospitalization of the chancre today means innumerable hospital days saved in the insane asylum, the home for chronic and incurable diseases and the home for feeble-minded children tomorrow.

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A Bloodless Field

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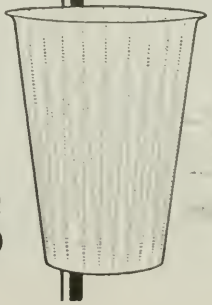

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OCCUPATIONAL THERAPY AND REHABILITATION

Conducted by HERBERT J. HALL, M.D., President, American Occupational Therapy Association, Devereux Mansion, Marblehead, Mass., and MRS. CARL HENRY DAVIS, Advisor in Occupational Therapy, 825 Lake Drive, Milwaukee, Wis.
Co-Editors: LORING T. SWAIM, M.D., 372 Marlboro St., Boston Mass., and MISS MARY E. P. LOWNEY, Room 272, State House, Boston, Mass.

HOW ONE SMALL CITY IS SOLVING ITS OWN REHABILITATION PROBLEMS

BY KATHRYN ROOT, COMMUNITY WORKSHOP, STAMFORD, CONN.

STAMFORD, Conn., is a city with well organized philanthropies, one excellent hospital, good doctors, and finely trained nurses, is open-minded toward new agencies with which to achieve its ideals of physical and social betterment, but a year ago it had never given thought to occupational therapy.

To see curative handwork well carried on and hear expert workers plan for its development in sanitariums, general and special hospitals and private practice is to be aroused to enthusiasm for it.

One Stamford woman being thus converted resolved to introduce it in her own community. Her resources were some teaching experience, skill in several handicrafts, a wide acquaintance with local professional and philanthropic men and women, the experience of a long and severe illness, and enough money to enable her to give her time and pay for the necessary equipment. Best of all was her familiarity with the methods in use at Devereux Mansion, Marblehead, Mass.

A light, quiet room, overlooking a stream and some fine trees, was rented and equipment for weaving and toy making installed. Loans of tables, shelves and stools from the Red Cross and of a loom and warping beam from a friend reduced the cost of furnishings to $150, this including a second loom. Rent and supplies for ten months brought the total to approximately $700. Half as much has already been taken in for teaching and sales, and materials on hand will, when made up, probably pay for the rest. Orders now unfilled amount to more than $100. There has been no advertising, but the venture has been freely and informally talked about.

To this room have come without asking a few pupils in weaving, one serious case of nervous illness, one obscure case combining nerves and an injured spine, a blind woman, a convalescent needing physical exercise, an overzealous spinster without quite enough to do, a gratifying number of buyers of toys and woven articles and many interested visitors.

From the shop work has gone out to the hospital and to shut-ins. In the former, from one to ten patients have been daily busy at some kind of handwork—knitting wheel caps, making wooden toys, baskets, and weaving on one tiny loom. The patients represent one case, a rheumatic ankle where toy painting gave satisfactory relief to nerves tense with pain, worry and loneliness; two cases of broken arms, one in which the doctor actually asked

One corner of the Community Workshop in Stamford, Conn., showing a girl at work at one of the looms. The shop is well lighted and cheerful looking.

Another view of the Stamford Community Workshop, showing wooden toys and other products of patients' handicraft. Through the windows one glimpses the attractive surroundings of the shop.

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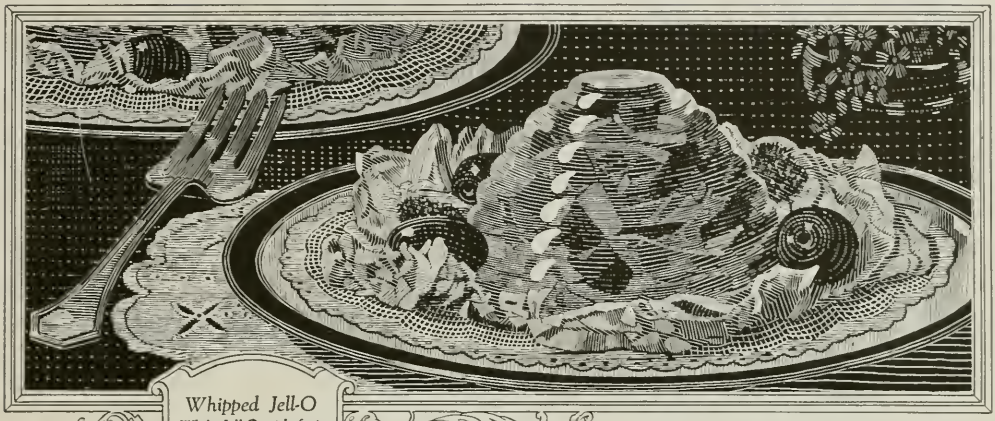

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that his patient be given sawing and sandpapering to exercise a stiffened elbow; one case of incurable heart disease where a raffia basket passed the hours of anxious impatience to return to the family; a mastoid case, a small boy who was so diverted by painting blue elephants that he forgot his daily tempest of tears when his mother left him; and many more, not forgetting the nervous woman who refused to cooperate in any treatment given and who left the hospital still unpersuaded to try the occupations offered or the woman who now needs to exercise her legs but cannot have a foot power loom because the ward has no place for it.

The hospital has no space to give so only the most meager apparatus can be taken to the building. An addition is to be erected in a few months and the directors have been asked to include a shop in the plans. Finances permitting, they will do it. Funds to equip it and keep it running will have to be raised outside, and the Hospital Aid Society has consented to act as a channel through which they may be administered.

Visiting the sick in their homes is limited by the time and strength of one teacher. The Visiting Nurse Association is interested, other charities will cooperate, and the clergy and parish visitors have waiting lists of those to whom aids might go. A plan is being formulated to index and file all reported cases until such time as they can be visited by a special worker.

Twenty-five patients in less than a year is not a bad beginning. Money and workers will come. There is no opposition. In thousands of towns and villages, this same opportunity is open to volunteers, even now, before there are enough fully trained occupational aides to meet the need.

Of course, such work should not be undertaken by people who have only enthusiasm to guide them, but it seems a pity to wait for years, perhaps, for the blessings of prescribed work when a little enterprise and cooperation will bring about results such as are here recorded.

SEND IN YOUR CASE REPORTS

The occupational therapy department is anxious to get from occupational teachers reports of specific cases in which prescribed work is believed to have been of real rehabilitative service. It would like, also, instances of unsuccessful attempts to interest patients or to develop their initiative. Records of failure are just as valuable, perhaps more so, than reports of success.

Please send these case records to Dr. Herbert J. Hall or Mrs. Carl Henry Davis, first having obtained the permission of the hospital superintendent for publication.

Some such form as this might be used:

Name of hospital
Name of patient (using initials if patient objects to publicity)
Age Sex Previous occupation
Nature of disability
Degree of helplessness
Kind of work employed as remedy for helplessness
Length of work periods possible at beginning of treatment
Length of work periods possible at end of treatment
Clinical notes covering general observation of patient, his improvement in morale, physical strength, etc. Remember that record of failure is as important as that of success. Sometimes in these clinical notes, a statement of the patient's own words, some statement of opinion by the doctor or the nurse will be valuable.

LEISURE AND IDLENESS

We who are interested in occupational therapy must not fall into the error of supposing that it is impossible for a man to be happy and progressive unless he is fully occupied, unless he is constantly busy. There is too much rushing to and fro in this world, too little leisure, too little time for quiet and contemplation. We are interested in supplying occupation to the handicapped because we know that enforced idleness, idleness that is helpless and hopeless, is a deadly thing. We know that a reasonable amount of worth while work is essential if there is to be any comfort in leisure. Leisure and idleness are two absolutely different states. Most healthy, well balanced men would become desperate in a short time with nothing whatever to do. Moreover, it is well known that the pursuit of pleasure is after a while an unsatisfying occupation. Real productive work seems to be one of the essentials of normal life; this alone makes possible the real enjoyment of leisure.

If a normal man cannot be idle without becoming mentally and physically unfit, how much more important is it that people who are slowly convalescent or chronically ill should have the opportunity for wholesome work! It seems inconceivable that we should have so long missed this vital point in our care of invalids.

But now has come the new profession of occupational therapy which studies the industrial needs of the handicapped from the point of view of happiness and progressive for the purpose of aiding in recovery from long and tedious illness. It is a wonderful field, one to engage the best efforts, the most careful study of medical men and occupational teachers. We are just beginning to see the possibilities, human and economic, just beginning to realize that here is a new and tremendously worth while opportunity for service.—EDITOR

TO GET NECROPSIES

Five cardinal principles for hospitals to follow in their efforts to obtain necropsies are enumerated by Dr. L. G. Richards, house surgeon of St. Luke's hospital in New York City, in a recent communication to *The Journal of the American Medical Association.* Dr. Richards bases his arguments on his observation of what one 400-bed institution has accomplished in obtaining a higher percentage of postmortem examinations. His principles follows:

1. Establish what might be termed an "entente cordiale" with that member of the family who, in event of death, is legally authorized to give permission. This has frequently resulted in securing permission before death in hopelessly incurable cases. Persons who at first seem to be bitterly opposed to a postmortem examination will themselves request one when the matter is presented properly.

2. Ask for permission in every case of death. It is only by repeated necropsies that pathology can make progress.

3. Request permission immediately after death. A close relative, when most keenly affected and grieved by death of one near and dear, is at that moment more willing to consent than at any other time. Later consideration or consequent discussion with others almost invariably results in a refusal.

4. Broach the matter of a necropsy only to the next of kin or the one legally ably to give permission. Effort to solicit the aid of an intermediary is usually a mistake and often the cause of failure.

5. Make every effort to obtain the permission before an undertaker has seen the relatives.

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CAGED BIRDS

By ALICE L. LEWIS, Toy Shop of the Industrial Department, School for Crippled Children, Pittsfield, Mass.

YES, literally, they are birds with clipped wings, these children fluttering to escape and a little stunned by the consciousness that some big cage has closed around them. The hospital with its terrors has gone and here is home—but how different!

How awkward to wear a leather jacket! How clumsy to carry an iron brace! How suffocating to live under the dome of a white plaster case! This eternal reaching out for crutches, this enforced cautiousness at rough

Some robin redbreast and his mate will find cozy quarters in this cottage made by a proud Berkshire cripple.

places, how trying such practices can become! To stay at home or to hang around the street corners while others frolic is no fun. The weary, hopeless feeling that it is all of no use is apt to come over these children.

All these and many more are mental and physical obstacles that confront crippled children who leave the hospitals. To care for and educate them, the Berkshire School for Crippled Children has been founded at Pittsfield, Mass., by a well known orthopedic surgeon of Boston. At this school they are given a home and education. As far as possible, their birthright of joy and happiness, which fate or circumstance tried to cut off, is restored to them. The children gradually find their balance and start true along the road of useful and happy expression.

One part of the education which seems to possess many desirable qualities is the industrial department, featuring toy-making, an industry adopted as the first step in the training of crippled boys for their life work. Toys have belonged to children from time immemorial. Instinctively, a child loves to construct. He is found with stones, pieces of wood and paper, trying to make something—absorbed and happy. No matter how crude and bungling the result, he is attempting to express himself. The work that is creative and full of joy is right for the child. In toy-making, sources of inspiration are found. Even grown-ups confess that toys are fascinating and interesting. They are a bond between old and young.

In the airy, well lighted shops at the school, where the shelves are lined with vivid colors, and where the humming of machinery and the scent of sawed wood fill the air, the boys awaken to ideals and the vision of new things. Real joy comes into their lives. The manufacture of toys encourages originality, cultivates taste and teaches self-reliance. It can be summed up in one word —resourcefulness.

The curative value of the work is recognized. It is beneficial to be busy about any task that gives varied physical exercise, is purposeful and productive. Work at the school is more than occupational; it is educational. The use of tools, the knowledge of wood, and the finishing processes on any article become a part of the child's knowledge. It is a fact that these Berkshire crippled children, coming from families of more or less education, generally less, become unusually intelligent as a result of this training. The industrial work may be, like music, dull or fascinating, according to the way it is taught. The spirit of the shop has been full of suggestion this past year. The manufacture of tables and chairs and doll houses has opened the way to discussion of homes

Whole colonies of birds may settle in the numerous houses constructed by boys at the Berkshire School.

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What Do You Expect In

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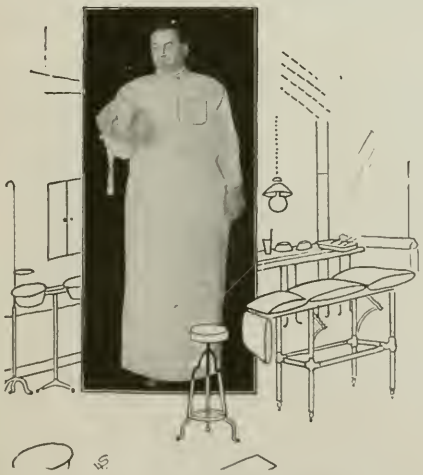

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and their furnishings. Bird houses lead easily to a study of our feathered friends. Sawed out animal toys call for a study of the appearance and habits of the creatures they represent. A small boy arrives to unsurpassed heights when he finishes his first aeroplane.

In fashioning wooden animal toys, the boys take keen delight.

Toy-making leads naturally into advanced wood and metal working, and thence to trades and vocations which are competently taught at the industrial shops.

Thus, in spite of bruised wings, these birds are encouraged to fly. In spite of lame and halting bodies, the boys' minds are taught to stretch and grow. They forget their limitations in active expression.

EMPHASIZES PRACTICAL SIDE OF REHABILITATION

The seventh annual report of the Massachusetts Industrial Accident Board contains the following from a chapter on the rehabilitation work accomplished by the Vocational Training Division during the first fourteen months of its existence.

"The work of vocational training has been approached by the Board with the idea in mind that injured employees must be brought to the highest stage of physical efficiency possible in view of their handicaps, and then placed back in employment at the job most suitable for them.

"The problem is an intensely practical one, requiring the fullest cooperation on the part of the incapacitated employee and insurer, with all efforts made by the board and other agencies aiming to reduce the period of disablement and fit the employee for permanent and gainful employment.

"The most important single factor in the return of the injured employee to productive employment is the matter of adequate medical and surgical treatment, and to this end insurers are encouraged to furnish injured employees the very best treatment and after care. The furnishing of the most practical artificial appliances is an important feature in helping to overcome physical disabilities.

"Insurance companies cooperated very fully, and in many instances they have continued compensation during the training period in order to encourage and strengthen the injured employee in the habit of work and in the acquirement of special skill to make up for the effect of the injury."

The report comments upon the survey made of employment opportunities, and the general attitude of employers toward the work of re-education and replacing injured workmen. "The objections raised were due largely to a misunderstanding of the industrial problem of vocational replacement, and is being cleared up by actual demonstrations of the fact that the re-educated and retrained injured man can perform the work for which he has been re-educated and retrained efficiently."

The points of difference in work with industrial accident cases and that which ex-service men are mentioned. "The government in dealing with the disabled soldier is dealing with a young man, usually between the ages of twenty-one and thirty-one, taken for the army under the selected draft system, and so selected because he was practically 100 per cent perfect, physically. The average employee injured in industry is thirty-eight years of age, and is not ordinarily at the time of the injury anywhere near 100 per cent perfect, is, in a large number of cases, unacquainted with the English language, and has long prior to his injury passed the formative period of his life. The United States Government has approached the problem regardless of the expense involved. Expense is an important factor in dealing with injured employees under the Workmen's Compensation Act.

Of the 234 cases dealt with specifically, eighty-seven were arm and hand disabilities; seventy-seven lower limb disabilities; forty were disabilities of the trunk, including back injuries; eight were eye cases; and twenty-two were miscellaneous handicaps. Of the total, 115 were given training and placed. In addition to these specific cases, advice and assistance were given to a large number.

"NEW YORK DOES CARE"

The above poster, with its appealing caption, was a factor of inestimable value in the recent financial campaign of the United Hospital Fund of New York, described in the January issue of THE MODERN HOSPITAL.

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ARISTON JELLY POWDERS

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Ariston Coffee—Cereal Blend No. 4, per pound	.18
Ariston Coffee—Cereal Blend No. 5, per pound	.16

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QUERIES AND ANSWERS

TO MARK SURGEONS' GLOVES

To the Editor of THE MODERN HOSPITAL:

Can you suggest any satisfactory method of marking surgeons' rubber gloves? Each surgeon in our hospital buys his own gloves and we must find some way of identifying them. I have used a special kind of indelible ink but it was not entirely satisfactory. SUPERINTENDENT.

In marking surgeons' rubber gloves, an excellent method is to run a stitch of thread around the upper rounded corner of the gloves. By adopting, let us say, two colors of thread, black and white; three or four positions on the glove, i.e., front, back and either side; and one, two or three stitches, you can provide almost an indefinite number of combinations. You could readily devise a little code and post it where the gloves are used, as, for example:

1 white stitch, back, Surgeon A.
2 white stitches, back, Surgeon B.
3 white stitches, back, Surgeon C.
1 white stitch, front, Surgeon D, etc.

RADIATORS BEHIND STEEL WALLS

To the Editor of THE MODERN HOSPITAL:

Can you give me any information regarding the heating of operating theaters by means of radiators placed behind enameled steel walls? LONDON ARCHITECT.

We do not know of the use of enameled steel for that purpose but it may be that your inquiry refers to a glass lined room which Schmidt, Garden & Martin, Chicago architects, designed about ten years ago for an addition to Alexian Brothers Hospital in that city.

The addition contains an operating room, laboratories and several surgical dressing rooms in which a thick white glass—we believe it is called Carrara—was used extensively. Steam pipe coils are in a space about two feet wide between the outer brick walls and the glass. The glass is about one inch in thickness with polished faces, ground on the edges and with polished rounded edges. The glass of walls and ceilings is supported on rigid frames of steel angles and tees, which are spaced adjacent to the joints in the glass to facilitate proper fastening of the latter. Wall, floor and ceiling angles have polished glass coves of about one and one-half inches radius.

There are steel and plate glass casement windows in the brick walls as well as in the frame work supporting the white glass lining and steel doors, giving access to the pipe space from the jambs, heads and stools of the windows; the stools and heads are perforated.

The glass was fitted as tightly as possible on the frame work and pointed with white lead and Litharge pointing material, but there has been no breakage from expansion. The rooms are very comfortably heated with apparently no unusual expense in installation or operation. The result is an absolutely smooth and washable surface with the absence of radiators.

It is probably that a similar result can be obtained by the use of enameled steel plates. There need be no fear of breakage by expansion if the plates are fastened to a steel frame work similar to the one described, for then the expansion of plates and support would be alike. However, enameled plates have the disadvantage of the enamel splitting from the plate if it is given a sharp knock.

The heavy glass may cost a little more, but it is certainly very durable and does not have objectionable wavy surface of enameled plates to distort every reflection.

COST OF BUILDING

To the Editor of THE MODERN HOSPITAL:

Our hospital has 160 beds for patients. We desire suggestions for a building which will house kitchens, diet kitchens, serving rooms, storage rooms, refrigerating plant, sleeping quarters for female employees, dining rooms with a seating capacity for twenty officers, for sixty nurses, for fifteen male employees and for twenty-five female employees. What would you consider the approximate cost of such a building? SUPERINTENDENT.

Your question as to the approximate cost of a building such as you described was referred to Schmidt, Garden & Martin, Chicago architects, who assume that the building would be four stories and basement, of fireproof construction and of durable materials throughout.

The basement, according to their plan, would be devoted to storerooms and have refrigerating machinery. The first floor would have the kitchen, diet kitchen, bakery, and necessary toilets. The second floor would have the nurses' and officers' dining room; and if it is impossible to place the employees' dining room on the first floor, it should be on the second floor, too. The third and fourth floors would be used for help, housed largely in rooms large enough for two beds, with a few single bedrooms and all necessary auxiliaries, such as toilets, living rooms, etc. The capacity would be thirty persons.

Such a building would have a content of about 150,000 cubic feet and should be built for forty or fifty cents a cubic foot, or from $64,000 to $80,000.

MORGUES IN HOSPITALS

To the Editor of THE MODERN HOSPITAL:

How large must hospitals be before they maintain their own morgue? SUPERINTENDENT.

There are a number of factors involved in this matter, as for instance, the psychological reaction of the relatives of patients who have died in the small hospitals; whether the hospital is located in the city or rural districts; and whether it carries on post mortem examinations to any extent. Every hospital of twenty-five beds should have its own morgue; or some room with suitable refrigeration.

Adv. page 52

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Baking Powder

Adds only wholesome qualities to the food and makes it appetizing.

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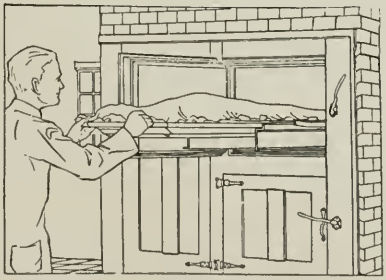
Perfect Sanitation is the First Requisite in Handling Cadavers



Carriage and tray may be partially or fully withdrawn for the purpose of viewing the subject, and is self-supporting even in the most extended position. Can be installed in any mortuary refrigerator.

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Albany Hospital, Albany, N. Y.; Army & Navy War Hospitals (Various); Bellevue Hospital, New York City (400 in use); Blackwells Island Morgue, N. Y.; Brooklyn Hospital, Brooklyn, N. Y.; Cleveland City Hospital, Cleveland, Ohio; Coney Island Hospital, Coney Island, N. Y.; Gelsenger Memorial Hospital, Danville, Pa.; Harlem Hospital, New York City, Jersey City Hospital, Jersey City, N. J.; Kings County Hospital, Brooklyn, N. Y., Manhattan Maternity Hospital, New York City; Methodist Episcopal Hospital, Brooklyn, N. Y.; Montifiore Home, New York City Mt. Sinai Hospital, New York City; Murray Hill Hospital, New York City; National Home for Disabled Volunteer Soldiers, Main Branch, Virginia Branch, Philadelphia General Hospital, Philadelphia, Pa.; Woman's Hospital, New York City.

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The De Canio Mortuary Support is made of iron, heavily galvanized after manufacture to preclude the possibility of rust or corrosion. The De Canio consists of only three parts: Stationary Frame, Movable Carriage and Removable Tray. Warping, binding or sticking in operation is impossible.

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Hints to Hospital Superintendents

MEDICAL REPORTS TO TRUSTEES

It is important that hospital boards of trustees should receive a report of the medical work each month as well as an account of the money earned and spent. There should be two reports to the board each month, a medical report and a financial report. From these can be gained a true perspective of what the hospital is doing for the money spent, and a better balance sheet can be established. To this end the following is a suggested form of medical report which may be of use to hospitals.

1. Volume of business done:
   a. Patients admitted,
   b. Patients discharged.
2. Physical assets:
   a. Patients discharged well,
   b. Patients discharged improved.
3. Physical liabilities:
   a. Patients discharged unimproved,
   b. Patients dead.
   c. Infections and complications.
4. Consultations held.
5. Reports of results of investigations made by medical records department.
6. Recommendations made by staff to superintendent.
7. Action taken by superintendent as a result of these recommendations.

In such a report as this it is quite understood that the various points mentioned have already been reported in detail to the staff and considered by them.

ECONOMY BY SUBCONSCIOUS SUGGESTION

"The aggregate of the waste from thoughtlessness in the use of small items and carelessness in the hadling of all articles is astounding, states Bulletin No. 37 of the American Hospital Association. This carelessness and this thoughtlessness and the resulting extravagance come directly from the effect upon the average mind of the large visible stocks of supplies and the routine ease in securing replacements. It is normal psychology.

"It cannot be effectively combated by rules or reprisals. It is rarely an offense; the person is merely reacting to subconscious suggestion.

"A proper storeroom and requisition system will materially reduce the amount of supplies visible at the point of use. This always pays. But even then moderate visible supplies of a nature readily permitting waste are necessary in hospitals and the replacement of damaged equipment must always be promptly made. The remedy must combat the result of these factors.

"Two methods have proven of value. It is always worth while to study the use of all supplies as practiced in your regular hospital under particular persons.

"The dispensing of supplies should then be done in the way that least often leaves an unused remnant in the hands of someone who must think and act in order not to waste it.

"The second method of proven worth is to drill into the minds of all, the aggregate value of the little wastes and the costs of the replacements, together with suggestions as to better uses for these sums of money.

COMFORT FOR NURSES

Do your nurses receive their guests in a grim and forbidding room where the chairs each seem to have a personal grudge against you? And do the pictures consist of former superintendents of the hospital who look as if they had been gathered to their fathers (and rightly) about the time of the Boston Tea Party? And are there some glass flowers or a stuffed bird in a case? If so, stop and consider. Or perhaps the nurses' reception room resembles a ball room of the time of Queen Anne except that the chairs are tired of life and look as if they might deprive you of yours if you were foolish enough to entrust it to them. Then, too, stop and consider. Would it not be economy in the end to change the room with a small outlay of money into a homelike restful place? Economy in mental outgo of the nurses, economy in that you would get more nurses. It is true that today when other professions are becoming so attractive the profession of nursing must mind its p's and q's if it is to hope to have the necessary number of young women entering its ranks.

FOR CHECKING SMALL EQUIPMENT

One of the most trying of hospital problems is the keeping of small equipment in place. The provision for a weekly inventory does not always meet the situation. One school of nursing has devised a plan that has apparently been most successful in checking the loss of small equipment and in keeping equipment up to standard in the matter of repair.

This hospital has each ward equipped with a dressing room in which are kept articles needed in treatments. A senior student has the responsibility of this room on each ward. A form is provided showing the standard list of articles and it is checked every evening by the student and left at the training school office before she goes to dinner. She gets the form again in the morning as she goes on duty. The form is ruled for a month's use. The system works well when constantly supervised and this is a matter of small effort. Properly carried out, the chart registers all shortage and breakage, and hypodermics, scissors and other small equipment are much more apt to be found in their place and in good repair.

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Facts Would Not Justify Such a Decision

A PATIENT developed a rash after an injection of diphtheria antitoxin. But have you stopped using antitoxin in diphtheria? Hardly, because you know —you *realize*—that that patient is, perhaps one in a hundred; and to cut antitoxin from your list of therapeutic agents because of an occasional anaphylaxis would be a decision without justification.

Is there any more logic—is there any more justification in taking the joy out of your patient's breakfast, as you do when you pronounce "Cut out coffee!" without the history, the etiology, the symptomatology, the diagnosis of *each particular case* pointing conclusively, or even possibly, to coffee as a pathologic irritant?

Here is what Professor Samuel C. Prescott, head of the Department of Biology and Public Health, Massachusetts Institute of Technology, says of caffein:—

"For the great majority of normal individuals it is a mild stimulant of the heart, increases power to do muscular work, increases concentration of mental effort and therefore the power to do more brain work. It is not followed, except in excessive doses, by undesirable after-effects. Our studies lead us to entire agreement with the results stated by Hollingworth that when taken with food in moderate amount, caffein is *not in the least deleterious.*"

That case management which gives relief with the least derangement of the patient's normal habits certainly is to be preferred over that which upsets his daily routine of living. Taking coffee from the breakfast of the vast majority of patients is adding hardship to illness.

Is it necessary? In how few cases is it really necessary? Turn to any work on dietetics.

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FOREIGN CORRESPONDENCE

THE BRITISH NATIONAL PROVIDENT SCHEME FOR HOSPITAL AND MEDICAL SERVICES

By Our London Correspondent

THE rich and poor in this country are well served so far as medical attendance and care are concerned; the rich because they can afford to pay for such services and the poor because it is provided for them either gratis or at a cost well within their means. The hospitals, in which the most skillful surgical and medical aid possible is procurable, are open to the poor, and for the rich there are splendidly equipped and excellently managed nursing homes. But the middle classes, and especially those termed the lower middle classes, have no facilities of this kind and if serious illness attacks or if an accident happens to any member thereof, he or she must perforce be treated and nursed at their own homes, which are lacking in most of the essentials which make for recovery, and they are denied the assistance of the most expert medical attendance and nursing. Moreover, even the voluntary hospitals, for the most part, have been compelled to charge for their services; at any rate, a great many of these institutions ask all their patients to contribute according to their means to the outgoing cost of their maintenance and treatment.

Thus it is plainly evident that the great and increasing cost and complexity of medical services, over and above the attendance of a general practitioner have made it impossible for a large majority of the population to obtain full advantage of the progress of medicine, although it is obvious that many cases cannot be properly dealt with unless the doctor in charge has all modern facilities at his disposal.

Some little time ago Dr. J. F. Gordon Dill, physician to the Sussex General Hospital, Brighton, conceived and carried into execution at that institution a scheme whereby the individual of limited means should be able to obtain for himself and family the advantages of the best medical treatment and care and the most efficient nursing. The plan proved successful at Brighton and has now been extended to London by the help of the London Hospital, the largest hospital in Great Britain, situated in the heart of the most poverty-stricken district of the metropolis; St. Thomas' Hospital of 600 beds or so; and the Royal Free Hospital with 200 beds or thereabouts. The scheme is a provident one, the object of which is to supply its members free of cost, beyond their subscriptions as members, with practically all the highest resources of medicine which are available. It should be clearly understood, however, that this scheme has nothing whatever to do with the National Health Insurance or any other organization for medical benefit and does not provide its members with ordinary medical attendance, that is, attendance by the general practitioner or other benefit to which they are entitled from the state or local authorities or under the National Health Insurance Acts. It is for the benefit of those who, irrespective of class or occupation, are in a financial position which makes them eligible for election as members. Persons insured under the National Health Insurance Acts are eligible for election as members of the scheme without regard to income; but in the case of all persons not so insured limits of income to qualify for admission are as follows:

		Limit of income	Annual subscription
1.	(a) Single person over 16 years of age..... (b) Widow or widower without children under 15 years of age or other dependents.....	£250	£1
2.	(a) Married couples without children under 16 years of age..... (b) Single person with one dependent..... (c) Widow or widower with one child under 16 years of age or with one dependent.....	£400	£1 10
3.	(a) Married couples with a child or children under 16 years of age or other dependents. (b) Single person with more than one dependent ..... (c) Widow or widower with more than one child under 16 years of age, or other dependents	£500	£2

Facilities for Treatment

Except where otherwise stated, members will receive without charge beyond their subscriptions to the scheme the following advantages:

Consultations. The medical attendant of a member may arrange, by appointment, for individual consultations at any of the cooperating hospitals, and such treatment as he and the consultant may jointly think advisable will be undertaken at the hospital if this should be necessary. For those members who are unable to leave their beds and who reside within a radius of four miles of Charing Cross (near Trafalgar Square) and the center of metropolitan London, the services of visiting consultants may be secured by appointment. For members outside this area, but within the metropolitan police area, who are unable to leave their beds, free consultations may be obtained by appointment, subject to the payment to the consultant at the time of consultation of a charge of ten shillings and sixpence per mile (equal to one-half of the usual mileage rates) beyond the four mile radius.

Adv. page 56

Walls of Liquid Velvet are washable and are restful to the eyes.

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Liquid Velvet never fades—neither does it crack, chip or peel. It is an oil base, waterproof enamel finish that comes in sixteen different colors. We recommend specially for hospitals our No. 347 Ivory or No. 340 Buff or No. 327 Cream as giving the most satisfaction in appearance and wear. Send for specimen color sheets.

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Nursing. The services of the "Queen's" and other visiting nurses will be available within the boundaries of the City of London and the metropolitan police areas for members at their own homes at the request of their medical attendants.

Dental Services. (a) Treatment in hospital. Such dental treatment as may be considered necessary for a member while under medical or surgical care in a cooperating hospital. (b) Consultations. The dental surgeon in attendance upon a member may arrange by appointment for consultations at the dental department of any of the cooperating hospitals.

Laboratory. All the resources of the pathological laboratories of the cooperating hospitals will be available for the benefit of members after consultation, including bacteriological and pathological investigations and examinations beyond the province of general practice, such as Wassermann and Widal tests, blood examinations and counts, the preparation of autogenous vaccines, etc.

X-rays. Examinations will be available where found necessary after consultation and a report will be supplied to the medical attendant of a member. Treatment by x-rays will be given when, after consultation, it has been considered advisable.

Massage. Massage will be provided by appointment for members in whose cases it is prescribed after consultation.

Electrical treatment. Galvanism, faradism, high frequency, ionization, diathermy, etc., will be administered by appointment, after consultation, in suitable cases.

Hospital treatment. Urgent cases will be admitted to hospitals as at present; other cases requiring operation or other hospital treatment will after consultation be admitted to hospital in due course, but a member will not take precedence over more urgent cases and the ordinary hospital routine will not be disturbed.

Radium treatment. If, as the result of a consultation in accordance with the regulations as to consultations aforementioned, it is decided that treatment by radium is necessary in the case of a member, such treatment will be provided by arrangement with the Radium Institute.

Ambulances. These will be available at the request of the medical attendant or of the secretary of a cooperating hospital for the transport of stretcher cases within the boundaries of the city and the metropolitan police areas.

The above are the broad outlines of the scheme which will, it is hoped, meet the medical and nursing needs of classes who up to the present time have not been able to obtain the most efficient medical, surgical and nursing services. It is encouraging to know that the scheme is likely to undergo great developments, even in the near future, and in the next letter it is probable that the writer will be in a position to deal with some of these developments.

The organizing and executive committee of this scheme are as follows: The Hon. Sir Arthur Stanley, G.B.E., C.B., M.V.O.; Lord Dawson, G.C.V.O., K.C.M.G., C.B., M.D., F.R.C.P.; Sir Alan G. Anderson, K.B.E.; W. McAdam Eccles, M.S., F.R.C.S.; J. E. Gordon Dill, O.B.E., M.D., Hon. Secretary.

THE RECONSTRUCTION OF THE BRITISH HOSPITAL SYSTEM*

By COUNCILLOR DAVID ADAMS, J.P., Newcastle, England

It is impossible for any layman to scan the long and glorious vistas of medical research of preventive and curative medicine without being stirred by a profound sense of gratitude for invaluable benefits conferred by every branch of the medical profession upon the human family. In spite of this brilliant past, a vast field for reform is presented to the view.

Additional hospitals are indeed imperatively required. In spite of the fact that voluntary contributions are larger now than in pre-war days, in spite of insistent organized appeals for assistance the voluntary hospitals have been driven to solicit a government grant of 1,000,000 pounds of which half has been promised for this year.

Public monies however should never be available for any public purpose without at least a medicum of public control. Government grants for the purpose in question should be via the principal municipal authorities which in return must have representation upon the boards of the recipient hospitals pending that inevitable hour when the voluntary system will be absorbed in the general scheme of publicly maintained and controlled institutions. That hour will necessarily be far distant. Whilst the ultimate ideal may be a free state medical service for every citizen, considerations of finance, if no other, bar that road today. Hence the private patient and the voluntary hospital must continue.

What then should be the relationship of the medical profession to rate-aided institutions? This question is part of the larger one: What is the position of the general practitioner to a unified scheme of medical service?

Long civic experience convinces the writer that a statutory committee of the existing local authority would prove the most efficient instrument as health authority. This body would report to and be ultimately subservient to the local authority which alone would possess power to levy rates. To this body a limited number of the representatives of the medical and allied services would be coopted. These would necessarily be in a minority but with full power to initiate measures and to vote.

The proposal to set up in each local health area a local advisory council (contrary to the opinions of the Society of Medical Officers of Health) would, I am convinced, be of paramount value to the country. Through the cordial efforts of the health authority and of the advisory council, preventive and curative work may be blended and coordinated and medical opinion concentrated upon the common task of a unified and comprehensive health service.

It will be freely conceded that under ideal conditions the actual clinical work of all hospitals should be divided up amongst the private practitioners and consultants, if these are to secure the experience they now lack. Yet there are vital obstacles to this procedure. Would the necessity for constant exercise of economy rule out the clinical staffing alone by part time persons of purely communal hospitals. The writer is convinced that it would do so.

A solution could be found in determining that in all the larger institutions a certain proportion of the clinical staff should be part time private practitioners and consultants. There would be reserved in every communal hospital a ward available for the private patients of general practitioners. Thus, the former of which there are millions in this country, would supply further facilities for the larger experience desired by private practitioners. The public would at the same time benefit by the contributions paid for the use of such institutions. Officers of the institutions should give full time to their duties.

It is fundamentally important in this great task that every scope should be given for the introduction of new methods and variety of treatment and opportunities for radical change.

*Abstracts from a paper by Councillor Adams on "The Relationship of the Medical Profession to Local Authorities in Respect to Rate-Provided Hospitals and Clinics."

Adv. page 58

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ST. LUKE'S is admittedly one of the best equipped and most efficiently managed hospitals in the United States. The unqualified endorsement and patronage of such an institution is, of itself, an assurance that Smith & Davis Hospital Equipment is exceptionally good.

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Book Reviews and Current Hospital Literature

BURDETT'S HOSPITALS AND CHARITIES

The Year Book of Philanthropy and Hospital Annual. Founded by Sir Henry Burdett, K.C.B., K.C.V.O.*

With its usual comprehensiveness, Burdett's Hospitals and Charities appears in its thirty-second volume. This exhaustive record of the hospitals and charity of British, American and Colonial hospitals has in its latest edition a few additions and subtractions which work toward its greater utility. It has been brought to fairly strict timeliness by the omission of institutions which have been closed for more than two years and of those from which no information has been received in the past three years.

The index, which is a new one, contains more than 500 entries and in response to a specially expressed desire has been made to include under the head of venereal diseases a list of hospitals which have been approved as treatment centers.

Burdett's may be considered as a most reliable guide to the hospitals, asylums, medical schools and colleges, nursing and convalescent institutions, sanatoria, religious and benevolent institutions and dispensaries of Australia, Great Britain, Canada, South Africa, Egypt, India and the United States. One of its chief virtues is in the accessibility of its material.

TEXTBOOK OF SURGICAL NURSING

By Ralph Colp, A.B., M.D., Instructor in Surgery, Columbia University, New York; Lecturer in Surgical Nursing, Presbyterian Hospital Training School for Nurses, New York; Adjunct Visiting Surgeon, Volunteer Hospital, New York; Chief of Surgical Clinic, Beth Israel Hospital, New York; and by Manleva Wylie Keller, B.S. R.N., formerly Chief Operating Room Nurse, and Anesthetist, St. Luke's Hospital, New York; and former staff member of Mobile Hospital No. 2, A. E. F., France.[1]

Of writing books for nurses there seems to be no end, but occasionally one is written that is so much above the average that it at once becomes outstanding. The new "Textbook on Surgical Nursing," by Colp and Keller promises to be of this type. It is an interesting example of the kind of team work in book-making that is so important in modern surgery.

The authors have stated that their aim is "to present as accurately and as simply as possible the actual detailed nursing of the various conditions related to things surgical." A study of the book indicates that this aim has been accomplished. The descriptions are brief, simple, and free from the mass of repetition that makes many books cumbersome.

Unusually good illustrations help to reinforce the text and add to its value. The chapter on surgical dietetics is based on diet lists that are used in the Presbyterian Hospital, New York, and this chapter alone covers subject matter that is invaluable in the work of actual nursing.

A very complete index makes it easy to secure sought-for information readily. It is refreshing to note the statement that a surgical nurse "must live up to that high social calling by being well prepared; she must be so educated and trained that she will not be a mere automatic tool, but an intelligent, enthusiastic co-worker, filled with a zeal for science, and giving her whole mind and heart to the work that is before her—for only recently in the history of surgery is there scientific surgical nursing. The surgical nurse is a pioneer; the trail has been blazed; but it is still a new one, and she must show what she can do."

TEXTBOOK OF MATERIA MEDICA FOR NURSES

Compiled by Lavinia L. Dock, Graduate of Bellevue Training School for Nurses. Seventh Edition, Revised in accordance with the ninth decennial revision of the U. S. Pharmacopoeia.[1]

The seventh edition of this well known text-book comes to us as an old friend, retaining all the good features that so many students have found helpful, and introducing much new and interesting material which is in accordance with the ninth decennial revision of the Pharmacopoeia of the U. S. A.

The classification of drugs is in accordance with their effect on the various systems of the body, which makes for convenience in class teaching and facilitates correlation of subject matter with that of other classes such as anatomy and physiology, medical nursing, etc. Such correlation stimulates the association of ideas and reinforces all efforts to memorize.

The text has been simplified and abbreviated, which is in line with the present tendency to minimize the use of drugs and rely to an increasing extent on other therapeutic agencies. A very complete index adds to the value of the book.

Only those who know from actual experience how hard it was to cull from exhaustive texts the limited knowledge of materia medica that nurses require can understand how great was the need met by this first "Text-book of Materia Medica for Nurses." Successive revisions have kept it ever in the lead and the name of the author—Lavinia L. Dock—insures it continued leadership and the high regard of the great army of nurses who are proud that she is one of them.

*London, The Scientific Press, Limited, 1921.
1. The Macmillan Company, New York, 1921.

1. G. P. Putnam's Sons, New York and London, The Knickerbocker Press.

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THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment, and Administration of Hospitals, Sanatoriums, and Allied Institutions, and to Their Medical, Surgical and Nursing Services

Vol. XVIII *March 1922* No. 3

MODERN TENDENCIES IN HOSPITAL DESIGN

By RICHARD E. SCHMIDT, F.A.I.A., of Richard E. Schmidt, Garden & Martin, Architects, Chicago

Most important of elements in modern hospital design is the tendency to plan for the future growth of the institution in an orderly, efficient, convenient and esthetically satisfactory manner, according to Richard E. Schmidt, head of a prominent firm of hospital architects in Chicago. This means, he says, a determination at the outset of the approximate ultimate capacity and scope of the institution, an estimate of what the community will require in hospital service at the end of twenty years. Far-sighted boards of trustees are purchasing when construction is contemplated, he declares, all the land required for the ultimate needs of the institution so as to forestall the continuing increment of cost.

A NUMBER of tendencies in the design of new hospitals are now very pronounced. Some of them have been given more or less consideration in the past, but hardly a single new hospital project is developed today without having certain factors thoroughly studied, exhaustively analyzed, the advantages and disadvantages planned schematically and tabulated by the architect and submitted to the building committee for its consideration before the working plans are begun.

One of the most important elements among these is the planning for the future growth of the institution in an orderly, efficient, convenient and esthetically satisfactory manner, which means the determination at the outset of the approximate ultimate capacity and scope of the hospital. To estimate what the growth of the community will demand in the form of hospital service at the end of twenty or twenty-five years, then to make rough plans of the buildings which will be required eventually, and to determine the area of land necessary to accommodate the various buildings properly, are not easy tasks. Wherever possible, boards are buying at the outset all of the land required for the ultimate institution in order to forestall the continuing increment of cost, notwithstanding the fact that the immediate needs of the community may not demand more than a fraction of it. Ample space is left not only for development in the light of the most advanced present day practice, but also for improvements which will be certain to arrive from time to time.

The number of beds in wards is decreasing. The proportion in numbers of single bedrooms to wards is constantly growing. Individual rooms are being equipped with more plumbing than formerly; in some instances every private room has a running water lavatory, in others an adjoining toilet room contains a water closet with a swinging hot and cold water spout, a lavatory and shower.

Substitution of shower baths for bathtubs is steadily increasing. Showers are unquestionably more sanitary, occupy less space and require less labor for maintenance.

Provisions for complying with the recommendations of medical and hospital organizations to raise the standards of hospital technique has brought with it a requirement for adequate laboratories, not the small affairs of former years for urinalysis and other simple work, but larger and better equipped scientific workshops with highly trained staffs.

Recommendations of these organizations also require properly situated rooms for the preparation, filing and examination of patients' records. These quarters are being so arranged that complete records can be filed and will be available at any time; space is reserved for a historian and

typist, and tables for the examination of records are provided.

Tray Service Grows More Popular

A comfortable room, large enough for a meeting of the entire medical staff, monthly or quarterly, is being provided in those new hospitals which expect to be abreast of the times.

Serving food direct from the cooking apparatus in the kitchen to the patients, commonly termed "tray service," is the tendency. At first attempted only in small hospitals, it is now in successful operation in at least one institution of 400 beds. This food service requires more complete elevator or dumb waiter equipment than other types.

Mechanical ventilating is being limited to the removal of air, vapor and odors from kitchens, toilet, bath, utility and sterilizing rooms, laboratories, operating and assembly rooms. Fresh air enters through windows, doors and cracks; such is the arrangement almost everywhere except for occasional assembly and operating rooms. A fresh air supply system with air washing devices maintained in perfect operation would be a valuable agency in the recovery and well being of patients, but neglect of the air washing device for only a short period will allow the ducts to fill with dust which is impossible to remove and which sifts into the rooms for a long time after the washing device is again in operation. This occurrence in hospitals has made, together with operating costs and failure to install humidity control, such systems taboo.

The fresh air supply to operating rooms is being tempered, filtered and conducted in relatively large, short, straight ducts, every part of which can be kept clean.

The cost of ice and additional labor has made mechanical refrigeration more economical, and new hospitals are almost universally being thus equipped.

Water Sterilized in Boiler Room

Central systems of sterilizing water are coming more into use and the notion that water sterilized in the boiler room cannot be piped in the operating or dressing rooms in a sterile condition has been demonstrated to be without scientific foundation. It has also been established that sterile water can be supplied in this manner in almost an unlimited quantity much more cheaply than it can be produced in comparatively limited quantities in a large number of sterilizers scattered about the hospital, each of which consumes steam, gas or electricity.

Push button type elevators and dumb waiters have come to stay. Dumb waiters of today are so much larger that they are practically elevators. The tendency is wholly towards electric operation. Where food service is of the tray type, one dumb waiter is installed for each story; elevators are being equipped with a self leveling device.

Walls Now Decorated in Color

More thought than formerly is being given to selecting sites for new hospitals at a distance from noise-producing agencies, among which are surface car lines and railroads. Deadening or absorbing sound within the walls of the hospital is also being given consideration. Special wall plasters, floor surfaces, floor and partition construction, doors and subdividing corridors are in use; it is now known in what manner sound can be absorbed and quiet created, but the expense of applying it in a thorough-going manner on a large scale does not seem to be within the reach of hospitals.

The use of colors for floors, walls and ceilings of operating rooms in lieu of white is now general. Different shades of gray greens or warm grays, all without gloss or luster, are being used extensively; dead black is even employed in a few instances. This extreme seems neither necessary nor logical.

There is a reversion from having everything in the wards white and without ornamentation; this idea was held and admired as sine qua non for a long time. Now a more sensible view prevails that tints of color are more pleasing and restful to the patient and do not lower the standards of cleanliness and sanitation; consequently artistic tints are being widely used, but not so many as to attract attention.

Offices Take on Hotel Aspect

Much more thought is being given to the comfort of the nurses and the provisions which should be made to encourage proper service, such as rest rooms, showers and dressing rooms for special nurses, who generally live at a distance from and must spend many days in the hospital leaving their patients' room only occasionally. They should have a place where they can go for a short time for a rest or change of clothing or to remain when the presence of their patients' friends makes it tactful to withdraw.

Not many years ago the office or clerical work of comparatively large hospitals was quite limited and two rooms were sufficient for the accommodation but it has grown to such a volume and so many functions have been added that old hospitals have been obliged to increase the office quarters and new hospital offices are being designed similar to those of a large hotel. Registration desk, room clerks, bill and information desks, telephone switchboard room, bookkeepers' room,

statistician room, auditor's room, stationery room and superintendent's private and public offices are being provided and separated so as to function without interference or confusion. Furthermore there must be waiting rooms and private offices for the officers of the training school, and separate toilet and locker rooms for the office help. All of these rooms are arranged and equipped to carry on the business of the hospital quietly and efficiently in a manner similar to that of any well regulated business enterprise.

More Rooms for Maternity Cases

Receiving and store rooms for the vast amount of food stuffs, drugs, medical supplies, fuel, furnishings, etc., consumed annually are being planned so that their contents may be weighed, counted, checked and inventoried when received, delivered on requisitions to the cook, pharmacist, operating nurse, engineer, housekeeper or other employe in charge of the respective departments and responsibility placed for their consumption or loss.

Obviously, there are separate rooms for the proper storage of the many kinds of articles, some of which must be cool, others in which temperature is negligible, but all of them under the direct control of a receiving clerk.

The ratio of maternity cases to the whole number of hospital cases has been growing rapidly and more adequate provision for them must now be made than in the past. Where formerly one birth room was sufficient, two or three are now required, sufficiently isolated and soundproof so as to allow them to function without disturbance to other patients. It is no longer necessary to confine a mother in any kind of a room because the delivery rooms are already occupied. Rooms for prenatal and infant clinics are being found necessary and extremely valuable in welfare work; where this work is done an office for the social welfare nurse and her assistant is provided.

Anticipating Growth of Out-Patient Service

Out-patient departments are not innovations, but for many years their value was not recognized. Today their space requirements have grown to large proportions and almost every branch of medicine is practiced. No mistake can be made in setting aside considerable space for such a department, notwithstanding the fact that it may not be finished off and equipped at the outset.

A conveniently located separate entrance, with waiting rooms, space for perambulators and wheel chairs, examining desk, card files, toilet rooms, and appropriate examining rooms for various services, is an obviously necessary arrangement.

The words "roof garden" seem to have an unusual charm, for there is a disposition to build roof gardens everywhere, notwithstanding that local meteorological conditions may not be promising. They are being built in the far north and as well as in locations where ground is cheap. In the first instance, patients can make use of it only a few days of the year; in the latter they would enjoy the outdoors more and find conditions more pleasing in an old fashioned garden, surrounded by trees, plants and flowers such as no roof garden can boast. Not only are roof gardens growing more numerous, but their equipment more extensive and costly. They require tile floors, enclosed, covered and uncovered areas, toilet rooms, good pantries and a securely guarded high parapet wall.

Kitchen No Longer Near Roof

Today's trend is not to place kitchens in upper stories. The cost of elevating fuel and all supplies seems too great and the claimed advantage that kitchen odors do not permeate the building as much from these higher locations as they do from kitchens in lower stories has not been proved. The much greater cost of gas than coal as a kitchen fuel and the cost of elevating coal and lowering ashes has possibly influenced this tendency.

Whether patients should be anesthetized in a special room or in the operating room, and what is the relative importance of having an anesthetizing, sterilizing or surgeon's scrubroom connected to the operating room are questions that have not been settled. Those who have had occasion to put these queries to many surgeons do not find agreement.

TO MAKE ASSOCIATION MEMBERSHIP QUALIFICATIONS UNIFORM

"Confusion and misunderstandings have developed among state hospital associations from the fact that the wording of qualifications for personal membership in the constitutions of the several geographical sections differs from that of the American Hospital Association," says Dr. A. R. Warner, executive secretary of the national organization.

"After a consideration of the far-reaching effect of this on the future," Dr. Warner declares, "the trustees of the American Hospital Association have by appropriate resolution expressed the opinion that the harmonious and effective organization of the field requires that these qualifications be identical in all geographical sections. The president has therefore been authorized to appoint a committee on which all geographical sections will be represented, with himself as chairman, to determine upon a wording acceptable to all sections. The American Hospital Association will then adopt this wording. Established memberships can of course not be modified or affected in any way."

PROGRESS PHOTOGRAPHS OF THE NEW FIFTH AVENUE HOSPITAL, NEW YORK

PLANNING AN EFFICIENT WARD UNIT

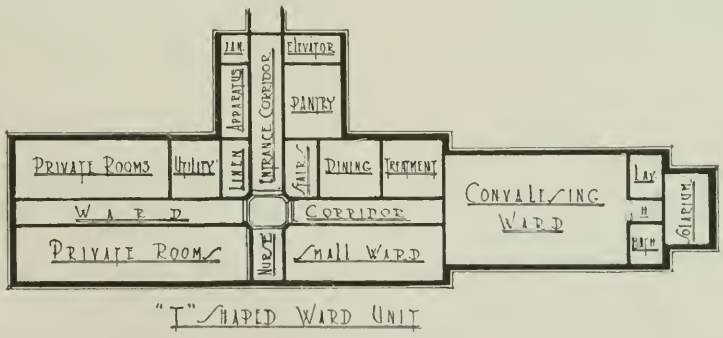
By R. G. BRODRICK, M.D., Director of Hospitals for Alameda County, San Leandro, California

THE ideally planned ward unit is one that best serves the patients with the least amount of lost energy on the part of hospital attendants. To accomplish this, the important requisite is *the central location of utilities*. These are not conveniently placed in most hospitals as, for example, in the corridor-pavilion type where the service is usually arranged at one end of the ward. Investigations made by Dr. Gilman Thompson reveal that the average nurse during eight hours of ward duty walks over five miles. Hence, proper arrangement of service rooms will reduce her work by lessening the time and energy spent in walking corridors.

On account of extreme variations in hospital problems it is impossible to adopt a standard plan for a ward unit. Local conditions will determine its size and shape. Standards, however, can be established for proper location of service rooms and essential details of equipment.

In the T-Shaped Ward Unit

When the site and requirements permit, the H-shaped hospital building or the inverted T-shaped ward unit lends itself most ideally to the proper placement of service rooms in relation to wards and private rooms for patients.



T-Shaped ward unit.

Here the nurse's station is placed in the center of the ward unit at the intersection of the entrance and ward corridors.

The serving pantry, elevator, apparatus room and janitor's closet extend along the entrance corridor so that, although convenient to the ward, the noises incident to their operation are kept from patients.

In a ward for the acutely ill, about one-half of the patients are apt to be in serious condition, some of them dying, perhaps, and the remainder convalescing. The nurse's steps can be confined to the smallest possible radius by segregating patients who are seriously ill in separate rooms at one end of the ward corridor and close to the nurse's station.

The utility, or sink room, on account of its frequent use by nurses attending bed patients must be within immediate proximity to these private rooms. No other service room should be interposed between the nurse's station and rooms occupied by patients critically ill.

What to Locate in Dark Corners

The linen storeroom can be well placed in the dark corner formed by the intersection of the perpendicular and horizontal axes; here it will be convenient to bed-ridden cases, who use most of these supplies. The stairway, enclosed, placed in the opposite dark corner and opening directly upon the administrative center of the ward is under the direct supervision of the nurse.

The remaining portion of the ward unit is set aside for convalescing patients. The treatment room and the dining room, both used chiefly by convalescents, are centrally placed, while at the extreme end of the building, beyond the ward, the solarium permits those frequenting it to enjoy sunshine, open air, and one another's company, removed from the depressing atmosphere of the hospital.

To lessen congestion and noise about the center of the unit, baths and toilets for convalescing patients are placed at the farther end of the ward and adjacent to the solarium.

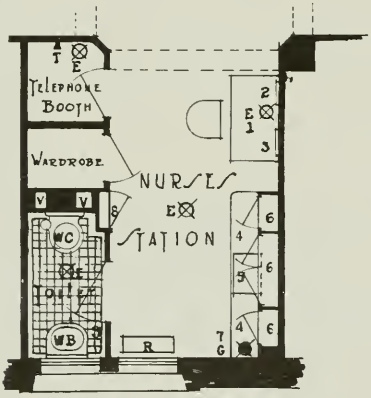
The details of these service rooms, which perform such an important function in the hospital

of today, must be thoroughly worked out. Only in this way can the maximum efficiency of the hospital personnel be developed. Rooms should be planned about equipment, which in turn must be arranged in proper circulation and must answer the requirements of the service to be performed.

The space allotted to this article permits only of the description of the principal service rooms.

The Nurse's Station

When located opposite the entrance corridor the nurse is enabled to control completely all avenues of communication, supervise the patients and meet members of the staff and visitors upon their entrance to the ward.



EQUIPMENT OF NURSE'S STATION

1. Desk.
2. Annunciator.
3. Bulletin board.
4. Case.
5. Sink.
6. Medicine cabinet.
7. Gas plate.
8. Panel board.
E. Electric.
G. Gas.
R. Radiator.
S. Switch.
T. Telephone.
V. Vent.

The nurse is provided with chair and desk (1) for clinical records. On the wall above are the annunciator (2) for nurse's call, bulletin board (3), and electric light fixture.

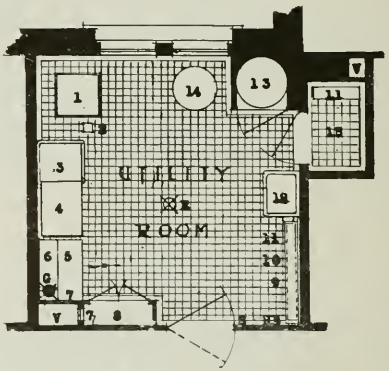
Adjacent is a case (4) with counter and sink (5) made of soapstone to resist the chemical action of drugs. Above the case is the medicine cabinet (6) provided with sash doors and opalite shelves. The corner compartment, wherein poisons are kept, has a bull's-eye signal in which a lamp lights when door is opened. A gas outlet is provided for the plate (7) whereon hypodermic syringes and needles are sterilized.

On the opposite side are a nurses' lavatory consisting of toilet and wash basin with mirror above; a vented wardrobe for nurses' wraps; and a ventilated, soundproof telephone booth.

In the wall is the electric panel board (8), so placed that the nurse may readily operate the light switches.

Thoughtful consideration must be given in locating and arranging the important service of the utility or sink room. Much of the arduous duty of the nurse is performed in this room, therefore every effort should be made to conserve her energy and lessen her steps by proper circulation and adequate equipment.

It must be large enough, at least 120 square feet, well lighted by an outside window, and provided with mechanical exhaust ventilation so that no odors may pass from it to the corridor or rooms of patients. The partitions may be sound-deadened.



EQUIPMENT OF UTILITY ROOM

1. Utensil sterilizer.
2. Floor drain.
3. Pack sink.
4. Drain board.
5. Work table.
6. Shelves.
7. Exhaust ventilation.
8. Specimen cabinet.
9. Utensil rack.
10. Drip pan.
11. Radiator.
12. Clinic slop sink.
13. Clothes chute.
14. Soiled linen hamper.
15. Dryer.
E. Electric.
G. Gas.
H.B. Hose bibb.
S. Switch.
V. Vent.

Bedpans and urinals are emptied in the clinic slop sink (12), where they are thoroughly scrubbed by brush in running water. When required, they are disinfected in utensil sterilizer (1) and then hung in rack (9). Beneath, and attached to the wall, is a nickel-plated copper pan (10) to catch drip from wet bedpans and urinals; it is flushed by a compression bibb (HB) and drains into soil pipe. The radiator (11) is placed beneath the drip pan so that the ascending heat dries bedpans and urinals and keeps them warm.

The combination bedpan and excreta sterilizer, complicated in design and frequently out of order, should be reserved for isolation wards where it becomes necessary to disinfect excreta from patients affected with intestinal-borne diseases, as typhoid fever, amoebic dysentery, etc., so that the infection will not be transmitted through the medium of sewage.

Twenty-four hourly specimens of urine, also

excreta for physicians' inspection, are kept in the ventilated cabinet (8) with perforated shelves; beneath is a locker for storing specimen bottles.

The work table (5), used extensively by the nurse, must be of adequate size and well placed. Here are prepared enemas, irrigations, compresses, douches, etc.; above are shelves (6) for necessary supplies, as flaxseed, mustard, magnesium sulphate, turpentine; below, a shelf for basins, pitchers and irrigators. These shelves, as well as the counter, on account of moisture should be marble.

A gas plate (G) for heating solutions and poultices and an insulated drawer to hold cracked ice are provided.

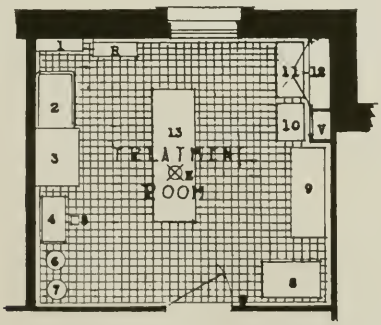
Sheets and blankets used in wet-packs are immersed in the deep sink (3) provided with a hardwood base for wringer attachment and ash drain board (4). Beneath the wringer is a floor drain (2). Wet articles are dried in the heated closet (15), which is also used for warming blankets.

Soiled linen should be handled in a sanitary as well as economical manner. Deposited in the hamper (14), it is counted, replaced in canvas bag, which is then dropped through a clothes chute to basement.

The Treatment Room

This room, used for examining patients, making diagnostic tests, applying surgical dressing and performing minor operations, should be so equipped that the patient receives proper care without unnecessary suffering.

In special wards, such as genito-urinary, maternity, etc., different arrangements for the particular type of cases treated must be made. This article deals only with the essentials common to all.



EQUIPMENT OF TREATMENT ROOM

1. Marble shelf.
2. Surgeon's sink.
3. Drain board.
4. Instrument sterilizer.
5. Floor drain.
6. Cold sterile water.
7. Hot sterile water.
8. Dressing carriage.
9. Shelf stand.
10. Instrument table.
11. Dressing table.
12. Instrument case.
13. Examination table.
E. Electric.
R. Radiator.
S. Switch.
V. Vent.

It is best located on the ward corridor near the convalescing patients, whose needs it chiefly serves. Bed patients, owing to their serious condition, are more conveniently examined and treated in private rooms. The entrance door, however, must be at least forty-two inches wide, to permit patients to be brought in their beds when necessary.

In general, for convenience of service and economy of "roughing-in," the plumbing fixtures, consisting of sink and sterilizers, are arranged on one side, while on the opposite side of the room are the tables and cases used in common. In the center is placed the examination table (13) with sufficient working space on all sides.

Near the sink (2) for surgeons' and nurses' "wash-up" is a marble shelf (1) for liquid soap and hand brushes, also an ash drain board (3) for convenience to the nurse.

Grouped together are the instrument sterilizer (4) and cold (6) and hot (7) water sterilizers. Beneath is placed a floor drain (5) to carry off the overflow that frequently occurs, especially from the instrument sterilizer.

On the opposite dry side instruments are kept in a recessed, built-in metal case (12), the glass doors of which open above the adjustable instrument table (10) and the table (11) for "set-up."

A shelf-stand (9) for holding solution bottles, utensils, etc., and dressing carriage (8), placed conveniently near the door, complete the equipment.

The Ward Diet Kitchen

A common fault is to build the ward diet or serving kitchen, by far the most used of the ward utilities, entirely too small. At least 200 square feet are needed to provide sufficient work room and space for proper arrangement of adequate equipment so that hot, palatable food may be quickly served to patients.

It must be centrally and conveniently located so that the trays may be served by the nurse with the least possible labor and delay. The ideal location is on the entrance corridor not too far from the nurse's station. Odors of cooking, as well as unavoidable noises incident to handling of dishes, will be kept out of the ward corridors and away from patients.

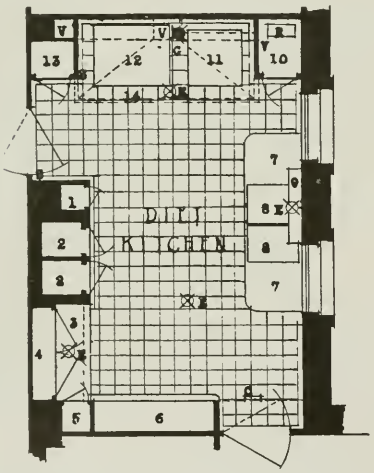
Food from the main kitchen is readily transported to the ward diet kitchen by means of an electrically operated dumbwaiter. This should be provided with an automatic device that lights a lamp within as the dumbwaiter reaches the ward floor. When the dumbwaiter supplies several floors, an indicator over the door shows its whereabouts.

An intercommunicating telephone system con-

necting the ward serving pantries with the main and special diet kitchens promotes efficiency. If, by reason of the extent of the hospital, it is not feasible to lift the food directly from the main kitchen to the ward diet kitchens, trucks must be employed.

These food trucks should be small, of light construction, equipped with rubber wheels and the upper shelf provided with openings in which heated aluminum steam table inserts containing hot food are placed. They are lifted in automatic elevators which open upon a separate corridor adjacent to the ward diet kitchen with which it communicates. The food truck does not pass through the entrance corridor.

A hinged elevator door, one end of which, resting on a roller, describes a quadrant, facilitates rapid delivery. Lining the door and sides to a height of forty-eight inches with cork greatly lessens noise in handling these trucks and reduces cost of upkeep.



EQUIPMENT OF DIET KITCHEN

1. Locker.
2. Refrigerator.
3. Counter.
4. Cupboard.
5. Bread locker.
6. Tray shelves.
7. Drain boards.
8. Sink.
9. Marble shelf.
10. Dryer.
11. Gas stove.
12. Steam table.
13. Broom closet.
14. Hood.
C. Clock.
E. Electric.
G. Gas.
R. Radiator.
S. Switch.
V. Vent.

The fixtures for cooking and serving hot food, consisting of gas stove (11) and steam table (12), are placed together under a vented hood (14) in front of which the wall is furred from the ceiling to eliminate cleaning and painting of the upper surface of hood. The under surface of this hood is lined with glazed tile continued up from rear wall; this makes a sanitary surface easily cleaned. The steam table (12) provided with openings for heating aluminum inserts and pans containing hot food sent from kitchen should have: (a) Front nine-inch serving board. (b) Nine-inch splashback. (c) Steam valves and coils for separately heating bain-marie pan above and dish warmer below, so that dishes may be heated without overcooking the food; painting valves distinguishing colors, e. g., steam valves white, water valve green and drain valve yellow, prevents maids from operating the wrong valve through ignorance. (d) Spring hinged drop doors for the dish warmer which close when not in use. The sliding door is worthless, since it is always left open.

The gas stove (11) with four burners and upper oven is essential for cooking "specials" and for night use.

A five-gallon hot water urn, steam heated, is convenient for making fresh tea. Pots containing tea balls are kept on steam heated shelves below.

Trays, set up on shelves (6), are transferred to the tray carriage stationed beneath and, after being supplied with food, are conveyed to patients.

A mechanically operated clock (c) stimulates prompt service.

Storage of Food and Supplies

The facilities comprising refrigerator (2) and cupboard (3 and 4), used in common, are placed adjacent. The counter (3) is for making salads, preparing cold foods, butter-slicing and bread-cutting. The case below contains drawers for flatware and lockers for linen. Above the cupboard (4) provides storage for certain foodstuffs kept in enameled containers, and for glassware and crockery used cold.

A metal vented bread locker (5) opens through a door with adjustable lourve directly on the work counter. The refrigerator (2), of stock type, built in, is of large size, being 48 inches wide, 25 inches deep, and 60 inches high, with three food compartments and one to hold 200 pounds of ice. If desired, mechanical refrigeration may be substituted. The inner surfaces should be of non-absorbing material, preferably solid porcelain with rounded corners. Four doors are used to lessen loss of refrigeration.

The drain communicates through a pop valve, readily cleaned, with trapped floor drain in front. When the floor drain is beneath the refrigerator it is apt to be wholly neglected until the discharge causes an obstruction in the drain pipe, which, therefore, should be of large diameter.

Soiled dishes are placed upon the scrapping drain board (7), beneath which is a container for swill, and are then thoroughly washed and ster-

ilized either in a mechanical dishwasher or, more simply, in a double compartment galvanized iron sink with a live-steam connection so that the dishes are scalded in water at temperature of 180 degrees Fahrenheit, sufficient to destroy such virulent germs as the bacilli of typhoid, diphtheria and tuberculosis. A marble shelf (9) placed at convenient height above for washing powder, and electric wall-bracket light with switch, facilitates this rather arduous labor.

Wet dish towels, brushes and mops are dried in the vented closet (10), tile lined, steam heated and provided with a metal-lined door with grill below.

A vented closet (13) provides a proper place for brooms, brushes, etc., above which is a shelf for such supplies as soap, soda and cleaning powder, which should be kept away from food.

A ventilated locker (1) near the entrance provides a proper place for the maid to hang her outer garments, which should not be left in the diet kitchen.

In the interest of economy and on account of its beneficial effect upon patients, meals should be served to convalescents in a dining room situated on the ward corridor and communicating directly with the serving pantry.

THE ARCHITECT AND HIS EMPLOYERS

By HENRY H. KENDALL, F. A. I. A., Boston

WHILE the title, "The Architect and His Employers," is a broad one, it is my intention to consider only a limited application of this relationship, the one in which the employer is the executive of a hospital,—its building committee, its superintendent, its trustee, director, or whoever or whatever the person or body may be to whom authority to employ is given. Architects are often of a simple and trusting nature, and frequently it is distasteful to them to inquire whether the party who suggests the planning of a hospital building has any right to employ or incur indebtedness on behalf of the institution.

There exists between you and your architect a great need for confidential relations, for full and free discussion with him of every feature of your problem. Are your means limited? Tell him frankly. Are you willing to put up with makeshift accommodations until such time as you can afford what you desire? Tell him. He can often show you how to plan for present use and later convert the structure to other purposes at a minimum of expense and sacrifice. After your plans are perfected, do you find that certain additions are necessary? Do not tell your architect to make them, and then when their cost exceeds your preconceived ideas, blame him for the excess.

Should be Mutual Understanding

There will always be opportunities to render unpaid service, but both employer and architect ought to realize that it is unfair to ask or to render such service without some definite understanding. A service is usually worth just about what you pay for it. If unpaid service is offered by an architect it is always with the hope, if not the expectation, that, by what is called "moral obligation," or by the exclusion of other architects on the ground that he was the first to be consulted, he will secure the job.

Both employer and architect should fully understand their respective authorities and advise each other at the outset just what their powers and limitations are.

Recently I heard an architect who had been at work, in conference with a superintendent, for eight years or more on plans for a new hospital building. A scheme satisfactory to the superintendent and the medical staff has been worked out, but when actual building was to be started it was found that neither superintendent nor architect had any authority to act; thus the work of eight years went into the discard without any compensation to the architect.

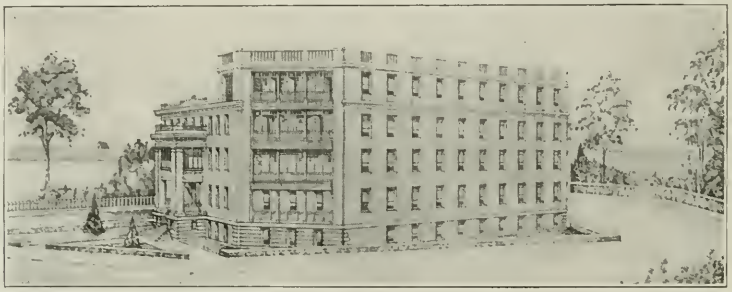
Similar instances could be cited indefinitely. An interested trustee, the president of the corporation, a member of the building committee, all anxious to serve the hospital or to further the interests of a friend, will request sketches without a second thought as to who will pay for them or whether they will or should be paid for at all.

It is unfortunately true that architects themselves have, in their anxiety to secure business, aided and fostered this abuse; but I believe that it is no more right for a board of trustees to take an architect's service, much or little, without adequate compensation, than it would be for the architect to enter a store and take goods from the counter without thought of payment. The latter we call shoplifting and punish accordingly; for the former we have not as yet coined a satisfactory name.

Therefore let us be sure that the authority to employ has been duly given and that the limits of authority are clearly understood by both representative and architect.

Formal Contract is Good Practice

There is frequently a very annoying lack of definite understanding as to what service the architect should render and what he should be paid for such service. A general practice is to assume that what is called the "minimum rate," generally accepted and recognized by the courts as six per cent of the cost, is an understood and sufficient payment for all and every service that may be demanded of the architect.



The proposed new Rockaway Beach Hospital building, Long Island, as visualized by the architects, Resler & Hesselbach, of New York, who momentarily anticipate authorization to proceed with its construction.

This sometimes leads to misunderstanding and it is becoming more and more the practice to execute a formal contract between employer and architect stating clearly the service to be rendered and the returns therefor, or, in case this is deemed too formal a procedure, to embody in a letter a statement covering such points. The American Institute of Architects has prepared forms of contract between owner and architect covering several methods of employment which when used either as printed or as the basis of correspondence, adequately cover the points in question.

The superintendent is usually the authorized spokesman of the employing body, and rightly so. He alone has his hand and mind upon every detail of the organized work of the hospital. He knows the details of procedure as no member of the board or building committee can. He understands the daily routine of administration and what the duties of each group or individual are. He has had a part in the management of other institutions and knows, often from bitter experience, what errors in planning or arrangement can be made. If a man of force and ability, he will have definite ideas as to where and how he wishes his units arranged; all of this information he will bring to his architect. On the other hand, the architect, if he is the man of experience he should be, will be able to bring to such consideration other solutions of kindred, if not identical, problems.

A superintendent with a national reputation, with whom I have been associated for many years, once said, "My architect and I often disagree. When we do, we sit down and thresh it out; sometimes I win out, sometimes he, but we do not *do* anything until we are agreed on the best way to accomplish it; and we are the best of friends today, after a score of years' service."

The superintendent is, I have said, properly the mouthpiece of the employer; but he, too, is, or should be, ever mindful of the power back of him. He should keep in touch with the members of his board or committee and be sure that his acts meet with their approval. A radical innovation or new idea should be thoroughly understood by them before execution. I once was asked, "Why did you permit this? Superintendents come and go, but your building will endure through the service of many superintendents."

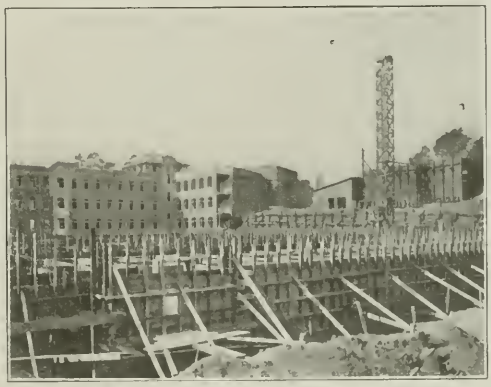
The architect is a technical adviser, an expert in bringing to pass things conceived and desired, the mechanical methods of realizing which are

Leominster, Mass., is soon to boast this attractive home for Leominster Hospital, the drawing of which is furnished by the architects, Kendall Taylor & Co., of Boston.

A general view of Highland Hospital of Alameda County, Cal., now under construction in the city of Oakland, as it will appear when completed. The central administration building is not shown in this photograph. The structure will be made up of seven buildings of three stories, basement and roof garden each, and will have a capacity of 650. When completed the building will represent an investment of $2,000,000.

beyond the training of officers who see the need and suggest the idea. The patient who comes to the hospital knows his need of care and of protection from infection and all the hazards of illness, but he cannot tell the doctor or the nurse how these things are to be done. He trusts to them in full confidence that all that is humanly possible will be done for him.

So, it seems to me, must the superintendent and the building committee come to the architect. They must place before him their needs, their problems, the results they desire to attain; and it is the architect's job so to plan that these things may be done economically and with permanence and convenience.



Wards 4, 6 and 8 of Highland Hospital as they look at the present time. In the distance is seen Ward 2 completed on its exterior but without windows. Note the service building in the rear and the sections through the communicating corridors.

This leads me to the statement that it is of primary importance that the relation between architect and employer should be one of mutual confidence and trust. In few other relations in life is such absolute dependence of one upon another exercised as that between employer and architect. Vast sums of money are expended because the architect so specifies and his judgment is final in almost all problems of construction. In details of finish and decoration the employer exercises a measure of control, but his dependence upon the architect's skill and knowledge in all the larger problems is absolute. Rarely does he exercise more than perfunctory supervision of construction or study with understanding, specifications.

Therein lies the great need for confidential relations between the two parties. Therein lies the need for more care in the selection of an architect and for a full and free consideration with him of every feature of the problem. Are the means limited? Tell him frankly. Are you willing to put up with makeshift accommodations until such time as you can afford what you desire? Tell him. He can often show you how to plan for present use and

In this photograph may be seen a panoramic view of Highland Hospital as it appeared several months ago. This contract is almost completed.

later convert the structure to other purposes at a minimum expense and sacrifice. After your plans are perfected, do you find that certain additions are necessary? Do not tell your architect to add them and then, when cost exceeds your preconceived ideas, blame him for the excess.

Needs a Restraining Hand

On the other hand, the architect needs the wise counsel and restraining hand of the executive. He may wish to design a building or group that will be a monument to his artistic taste and a credit to the community. Such display is legitimate, if funds permit; an artistic structure is ever a delight. In this connection I recall the definition of an old English writer upon architecture, who said, "Well building hath three conditions: Commoditie, Fitness, and Delight." No structure is a real success that does not combine these three qualities and, however limited his means, the architect endeavors to so clothe his construction as to cause delight.

I have written this article with regard, principally, to the architect who is adept in hospital construction, for I think the board wise which selects someone especially experienced in the class of building it contemplates. There are cases where, for one reason or another, such a person is not selected. Undoubtedly the employer's choice falls upon someone who is, in his judgment, able to bring to the solution of his problems the requisite ability to meet the need, but the required study often takes more time than can be given. Some lessons come only by experience, and no board likes to be the subject of experiment. This may introduce a new function of the architect. The consulting, or associated, architect, who, bringing his wealth of practical knowledge to the aid of the architect retained by the employer, checks his drawings, criticizes his layout, and assists him in obtaining a satisfactory solution to the problems.

A hospital is not a group of rooms with sanitary bases, coved corners, tile floors, marble wainscots and flush doors. It is a great mechanism, functioning with the least possible friction, the fewest steps, the most easily supervised areas, and the most expert service, with the least expenditure of human energy. These vital elements may be the helpful suggestion which an associated architect, versed in the art and familiar with the essential principles of hospital planning, can contribute to the selected architect's plan, without in any way trenching upon his control of design and treatment of the buildings.

The keynotes of successful relations between an architect and his employer are ability, confidence, and experience, with a liberal allowance of patience and tact on both sides.

"It is a curious thing to observe how almost all patients lie with their faces turned toward the light, exactly as plants always make their way toward the light."—Florence Nightingale.

Sacramento, Cal., is to have a new building, Sutter Hospital, the above sketch of which has been drawn by Frederick H. Meyers, architect.

SOUNDPROOFING IN BUILDINGS, WITH APPLICATIONS TO HOSPITAL CONSTRUCTION

By F. R. WATSON, Professor of Experimental Physics, University of Illinois

THE problem of soundproofing in buildings has received an increasing amount of attention because of the modern demands for the reduction of noise. Particularly in hospitals[1] is this true where the recovery of patients is hindered and sometimes seriously menaced by the prevalence of objectionable sounds.

Methods for insulating sound involve a number of perplexing problems. The theory of the subject is incomplete and the practical attempts to secure effective soundproofing are not always attended with success, even though the constructions are in accord with the theory and apparently have the elements of adequate insulation.[2] Sound progresses with facility through the different materials in the building structure in paths not easy to trace and may be heard in positions quite remote from the source. This action together with the extreme sensitivity of the ear in hearing explain why the insulation of sound is a difficult matter.

The Smith Memorial Music Building at the University of Illinois

Two Types of Sound

The general problem of soundproofing involves a consideration of two types of sound. One type originates in the air by means of a violin, the voice, a clarinet, etc., and proceeds outward from the source through the surrounding air to the boundaries of the room. Here the energy may be transmitted to an adjoining room in three ways,—first, by passing through the air passages in ventilator pipes or other openings; second, by setting the separating wall in vibration so as to create sound waves on the further side; and third, as an elastic wave motion in which the pressures and rarefactions of the sound waves are transmitted from particle to particle in the wall and are communicated to the air on the further side. Experience shows that the escape of sound is usually greatest through the ventilation ducts so that, unless these vents are arranged in some special manner to hinder the transmission, it is a waste of effort to install soundproof walls or floors or other special constructions. Next in importance to the ventilation system in the transmission of sound is the vibration of walls. Sound pressures and rarefactions in one room set a wall in mechanical vibration and the wall, in turn, sets up sound waves in the air on the further side. The action is more marked if the wall is thin or if it is in tune with the sound. The amount of energy transmitted by elastic waves is usually small compared with the transmission by the vents and by wall vibrations.

Disturbance Caused by Vibrations

The other sounds to be considered in soundproofing are the vibrations generated in the building structure by motors, pianos, elevators, street

1. "Sound Deadening in Hospitals," by Richard E. Schmidt, Surgery, Gynecology and Obstetrics, Vol. 21, pp. 105-110, 1920. An excellent article, including essential principles of soundproofing.
2. "The Insulation of Sound," by Wallace C. Sabine, The Brickbuilder, Vol. 24, pp. 31-36, 1915.

traffic, etc. These vibrations travel easily through the continuity of solid materials and, by setting up resonant movements in partitions or furniture, may create sound waves in air. It is more difficult to stop these vibrations progressing

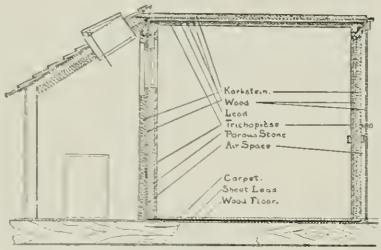


Fig. 1.—Section of noiseless room.

in the building structure than those passing through the air. The effective method of control, as in the case of the sounds in air, lies in the interposition of a discontinuity in the path of the waves. For instance, an air space in masonry is theoretically an effective barrier because of the marked discontinuity in elasticity and density between masonry and air. Practically, however, this arrangement is not effective because the discontinuity is not complete; the weight of materials necessitating a contact across the air space that allows easy transfer of the vibrations. An approximate solution is obtained by inserting air-filled materials such as hairfelt, flax, sand, etc., which while lacking the rigidity of solids are still able to sustain a considerable load; and also, because of the enclosed air, make a fairly complete break in the continuity of structure.

The construction of a soundproof room is suggested by the foregoing considerations. The boundaries of the room,—the walls, floor and ceiling—should be as rigid as possible with the necessary openings for doors, windows, ventilation and other openings guarded in special ways to prevent transfer of sound. Single rooms of this kind have been successfully constructed. Figs. 1 and 2 show the details of such a room.[3] The walls were eleven inches thick and constructed of successive layers of sound absorbing material, air, cork, lead, etc. Other instances of soundproof rooms could be cited,[4] but the special constructions and unusual features adopted would not be practicable for ordinary buildings where the effort is made to minimize the thickness of partitions and yet maintain the necessary qualifications of strength and fireproofness.

3. "A Noiseless Room for Sound Experiments," by S. I. Franz, Science, Vol. 26, pp. 878-881, 1907.
4. "Soundproof Partitions," Bulletin 127, University of Illinois Engineering Experiment Station, 1922.

The insulation of sound in an entire building is a more difficult problem than for isolated rooms. Attention in this case must be paid to all the features of the building construction whereby sound might possibly be transferred: the building structure, walls, pipes and particularly the ventilation system.

The attempt to soundproof the Smith Music Building at the University of Illinois was made by the writer[5] in collaboration with the supervising architect, Professor James M. White. This project involved the insulation of forty-five small practice rooms in the attic, twenty-one classrooms and studios on the first and second floors, and the large concert hall in the center of the building. The soundproofing features adopted are such as would be needed in any building where control of sound is desired so that a description of the details will be applicable to the case of a hospital.

The framework of the Smith Music Building was constructed of reinforced concrete, thus giving a massive, rigid structure not easily affected by vibrations. Each room was treated as a unit and separated as effectively as possible from the building structure by air spaces, sound-absorbing materials and sand. According to this construction, a sound experiences difficulty in escaping from a room and, before entering another room, must penetrate a second similar insulation. Figs. 5 and 6 picture some of the details.

Greater Insulation for Music

Double partitions with a separating air space in which sound absorbing material was placed

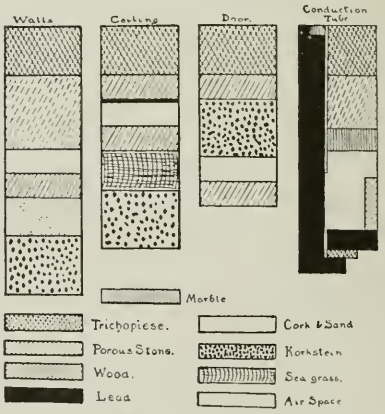


Fig. 2.—Details of noiseless room.

appeared quite effective in the insulation. Solid metal lath and plaster partitions, with air space, also appear promising for such constructions.[6]

5. "Soundproofing a Building," Architectural Forum, Vol. 35, pp. 178-182, 1921.
6. Architectural Forum, Vol. 32, pp. 249-252, 1920.

The effectiveness of these double walls was shown in several ways in the Smith Building. An observer speaking in a loud voice in a practice room with the door shut could scarcely be heard in the corridor outside. Music, however, penetrated the insulation more easily, although it was greatly diminished in the transmission. Students in practice rooms say that they do not notice sounds from other rooms except when they stop playing. The rooms are thus not absolutely soundproof but for practical purposes it appears that they need not be. Another evidence of the desirability of double walls was shown by a lecture room which was designed for speaking only, and was not soundproofed; the walls being single and the entrances equipped with ordinary doors instead of the soundproof type used on other rooms. When music was produced in this room, the leakage of sound into the corridor was more marked than for other rooms.

The floors of rooms were insulated from the building structure by sand and insulite (a ground spruce wood board). This served to minimize the transfer of vibrations of pianos which, because of their weight, made an intimate contact with the floor. Such a floating floor is comparable with a double-walled partition, the insulation in this case being between a room and a second room underneath.

Sound Leakage Through Ventilation

A marked leakage of sound took place through the ventilation pipes. In spite of four separate ventilation systems and individual pipes to each room for inlet and exit of air, a transmission of sound was evident. Special arrangement of the vents is now being made with promise of minimizing this trouble. One method of avoiding leakage of sound through ventilators would be to secure individual air supply for each room, as, for instance, by drawing air from the outside through a special opening, warming it when necessary by a radiator, and thus avoiding pipes that connect different rooms.

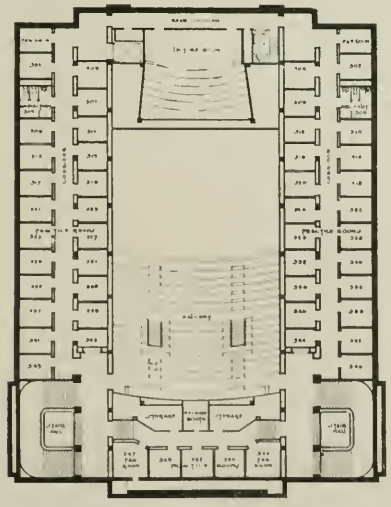
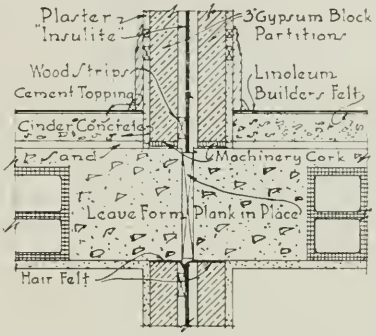


Fig. 4. Attic plan of the Smith Music Building.



DETAIL SHOWING FLOOR PARTITION CONSTRUCTION

Fig. 5.—Detail showing floor and partition construction.

Some mention should be made of the arrangement of radiator pipes and electric conduits. These were all carried in outside or corridor walls so as to leave the walls, ceilings and floor between adjacent rooms entirely unbroken. A continuous wall is acoustically more effective than one with openings cut through. Doors, windows and ventilators were also confined to the corridor and outside walls. Ventilation fans and motors were selected to be as noiseless as possible and were housed in separate rooms.

Hospital Machinery in Basement

Turning now to the problem of soundproofing a hospital, a number of additional features may be mentioned. All machinery should be placed in the basement, if possible, and mounted on heavy footings. The vibrations from especially heavy machinery could be insulated from the surrounding structure by using a separate base floated on crushed rock and separated from the surrounding flooring by a small gap filled in with asphaltum. Where it is necessary to mount machinery in the upper parts of the building, insulation from the structure may be secured by a construction of flax, felt, etc., which is bolted in a special way. (See Fig. 7.)

Elevators should be made as noiseless and free from vibrations as possible. Hydraulic elevators in this respect appear to have desirable qualities.

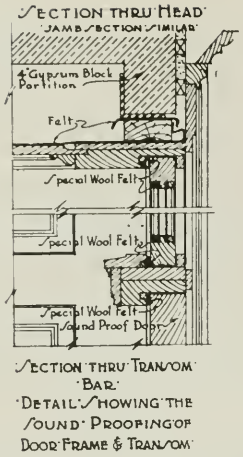


Fig. 6.—Section through door head and transom bar.

The elevator shaft should not be located next to rooms for patients but preferably surrounded by corridors and rooms where noise is not a disturbing factor.

Corridors and stair halls should be equipped with cork, linoleum or mastic floors to minimize sounds of footsteps and with padded ceilings to reduce other noises. A consideration of the quietness of hotel corridors is instructive in this connection. The heavy carpet not only deadens footsteps but absorbs other sounds as well. Carpets are unsuited for hospitals because of difficulty in keeping them clean. The objection to padding because it collects dirt and organisms is practically overcome by the use of a thin cloth covering. To this cover is applied a patented, rubber-like paint that gives a continuous, air-tight surface which prevents easy passage of organisms, but which, because of its extreme flexibility, transmits the sound waves to the absorbing padding with but little reduction.

Soundproof Doors Are Essential

Wards and private rooms may be quieted by the use of two-inch hairfelt applied to the ceilings and covered with the sanitary painted membrane already described. Soundproof doors may also be used with good effect.

Soundproof doors appear quite essential in securing quiet conditions and efficient sound insulation. The door should close all the cracks when shut, including the threshold aperture. The patent Hamlin door has many desirable qualities for this purpose. To close the door properly, it is necessary to push the door handle with some force. Failure to do this results in an escape of sound. An automatic closing device appears quite desirable.

Special study should be given to the location of rooms where disturbing sounds are generated. Kitchens and serving rooms should be considered in this connection; also maternity and children's wards. Soundproof doors and padded ceilings in these rooms will help in the reduction of noise.

The disturbances due to street traffic may be reduced by the use of wood block pavement to deaden sounds of vehicles and horses. A subpavement of crushed rock under the blocks will serve to minimize the transfer of ground vibrations set up by heavy trucks or street-cars. These street disturbances are quite marked in some hospitals, so that serious attention to this phase of the project should be given in the construction of new hospitals.

Consideration should also be given to the noises created by water pipes. Toilets equipped with tanks are less noisy than those in which the flush water enters with considerable velocity through a valve. High water pressure is likely to create disturbing sounds. Soil pipes and other drains should be surrounded by suitable padding to prevent escape of sound and also to insulate them from the building structure.

Construction of Floating Floors

Double floors may also be used. It is necessary to "float" the floor by a layer of felt, flax, etc., which should constitute a complete break in solid

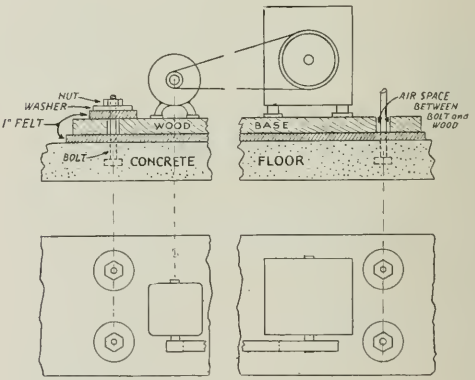


Fig. 7.—Diagram of construction for attaching machine footings to building structure so as to minimize vibrations.

materials. Nailing through this layer to the structure underneath practically nullifies its insulation. The felt may be laid between the structural floor and the sleepers to which the rough or finish floor is nailed. The addition of loose cinders or ground cork between the sleepers assists in the insulation. The floated floor should be quite rigid in construction, otherwise, adjoining boards in the finish floor will move slightly

with respect to each other and give rise to annoying squeaks. If the building has a concrete structure the floors may be insulated as shown in Fig. 5. In some respects, floating floors do not seem necessary for a hospital. The prevailing sounds are not those of music due to pianos or other instruments as in a music building where a discontinuity in the floor appears necessary but consist for the most part of the sound of voices of doctors and patients. A concrete floor of some rigidity would reflect these sounds quite effectively and would have the desirable quality of cleanliness. Where pianos are installed, they could be insulated by padded feet and by rugs. Rubber tired trucks and rubber heeled shoes would assist in the reduction of sound.

The considerations in the preceding discussion set forth some of the essential features of soundproofing that are suggested by the theory and supported by practice. Attention to the details enumerated should give an insulation resulting in a marked reduction of disturbing sounds. Absolute soundproofing can be obtained only with elaborate and unusual constructions, and does not appear necessary for ordinary hospital conditions because a small leakage of sound is not objectionable. One or two rooms with more elaborate insulation should be available for critical cases. Success in sound insulation cannot be predicted at the present time with certainty, but an observance of precautions in building with a proper record of results should develop in the near future a fund of information for reliable guidance in such matters that should insure satisfactory results.

HOSPITAL SERVICE IN RURAL MISSOURI

The uneven distribution of hospitals in his own state pointed out by Dr. Guy L. Noyes of Columbia in an article on "Hospital and Medical Service in Rural Missouri," published in a recent issue of the Missouri State Medical Journal, without a doubt finds its counterpart in many other states. In Missouri, according to Dr. Noyes, sixty per cent of the population has access to only eleven per cent of the hospital beds. In St. Louis, Kansas City and St. Joseph the ratio of hospital beds to population is much above the average for the United States, but these three cities contain eighty-nine per cent of all the hospitals in the state. Three-fourths of the counties in the state have no hospitals at all.

"We have in the state approximately 8,000 beds," writes Dr. Noyes, "none of which may be done away with. Moreover it is obvious that we cannot bring about a redistribution of the beds that are already established. Nothing remains but to erect new hospitals where they are most needed. The situation in Missouri is particularly favorable for the organization of county public hospitals. There has been given to every county the legal right to build and maintain a general hospital.

"I would place a public hospital in every county—in some counties more than one—and by that means be able to give assurance to the recent graduate in medicine trained in the hospital wards and laboratories that he may go to the country to practice without relinquishing in any degree his ideals as to the quality of service he should render. I have no sympathy with the proposal to supply a group of substandard or poorly trained medical men on the theory that they will in their unpreparedness seek the seclusion of the countryside and after all be 'good enough doctors for the country.'

"I would so organize and equip county hospitals as to assure the young physician that his individual expectations as a medical practitioner need suffer no setback by reason of his residence in the country. I would assure him, further, of an alert and competent hospital and staff companionship. I would dedicate every county public hospital to the proposition that every man, woman and child is entitled to health. I would make every county public hospital a health center in truth and proceed upon the assumption that of the people it is to serve some are born healthy, some acquire health and that some must of necessity have health thrust upon them. Large and expensive hospitals are not necessary. Complete equipment for purposes of diagnosis and treatment is indispensable and yet easily obtainable by a county community.

"County hospitals with proper libraries, laboratories and equipment will encourage young medical men to come to us in the country. With hospitals such as are needed located in the county we shall again have significant contributions from medical literature as a result of observation of country doctors. And moreover we shall see a reduction in the rural death rate which has been constantly ascending during the past twenty years in spite of the fact that the city death rate has not been increasing.

"Such agencies as the state board of health and the state medical association should perfect an arrangement by means of which they may give authentic and useful information to any community seeking advice regarding the building and maintenance of a public hospital."

A construction photograph of the new nurses' home for Augustana Hospital in Chicago. The building is to be eight stories in height, the fifth floor being the one under construction when this picture was taken in February. Meyer J. Sturm, Chicago, is architect.

SALVATION ARMY HOSPITAL IN CHICAGO

A maternity hospital and home for girls is to be built by the Salvation Army on the far north side of Chicago. The hospital and home will be erected on a seven-acre site at the approximate cost of $150,000. Plans have been drawn by Richard E. Schmidt, Garden and Martin of Chicago, and construction will start in April. The hospital and home will care for Salvation Army cases throughout the state.

PROGRESS PHOTOGRAPHS OF THE SAGINAW (MICH.) GENERAL HOSPITAL

Upper left picture taken August 4, 1921; upper right, October 1, 1921; middle left, November 1, 1921; middle right, January 1, 1922; lower, February 1, 1922.

THE RELATION OF COST OF CONSTRUCTION TO COST OF MAINTENANCE

By MEYER J. STURM, Hospital Architect, Chicago

SO MUCH that has been written on the cost of hospitals has unfortunately been based on the cost per bed that the writer of this article attempts with some trepidation to make an analysis of the relation of cost of construction to cost of maintenance. It becomes necessary, therefore, to emphasize first the principle that from an ethical standpoint authorities and architects must be absolutely honest and sincere. Avowedly such a premise must rest largely on the conscience of those who are building, as in this class of construction the public must be safeguarded in every possible manner, especially so in the distribution of the money which is usually contributed by this same public.

> *"Hospital building committees unfortunately have a rudimentary idea as to the relationship between ideals and cost. No doubt this is most unhappily true of architects. Both the unsophisticated client and the uninformed architect begin by wanting everything, and then when contractors, material men and members of trade unions are through there is bitter disappointment. Immediately begins a drastic application of false economies, scrimping, playing of cheaters against each other, and the acceptance of second rate contractors with the result that the completed building has not only cost infinitely more than it should but also has a maintenance cost that mounts higher each year."*

Unfortunately the planning of hospitals has been left too largely in the hands of those who, by the selection of their architect, have shown a woeful lack of honesty and sincerity. This very attitude of mind bears a most vital relation to the cost of construction as affecting the cost of maintenance. Manifestly a hospital that is badly planned will cost more to maintain than one properly planned, requiring the minimum amount of travel and work in its maintenance.

Must Not Standardize Plans

There is no logical manner in which one could standardize the plan of a hospital so as to minimize this cost of maintenance. As a matter of fact so far as the planning of a hospital is concerned there is no possibility of standardization, and fortunately so, because if a standardized plan were once introduced and adhered to all progress in hospital building would be impeded. There is no great danger, however, of such an occurrence; we mention it solely to preclude the probability of a misunderstanding of the much mooted, discussed and abused use of the word "standardization." Equipment in construction and ordinary equipment can and should be standardized. This is also true of much of the routine.

A plea might here be made with propriety for architects who have made a study of this class of building and a word of praise be given to them and others who have done so much in the planning of institutions wherein the cost of construction, though always kept within reasonable bounds, has been secondary to the service to be rendered.

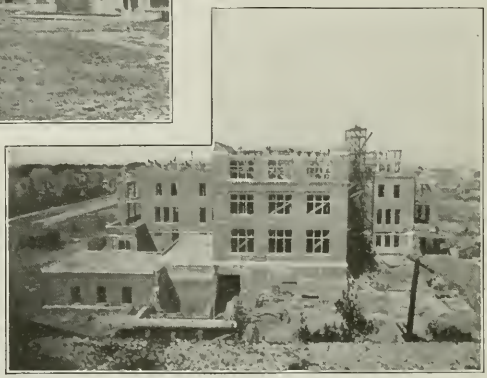
As to the physical aspect of this analysis, namely, concrete examples of essentials to minimize the cost of maintenance and justify the increased expenditure, a paramount consideration, and one taken for granted, is that the hospital has been properly planned; that is to say, all the service and administrative departments are so located that they will necessitate the least effort and the fewest possible steps for care of the patients. With this in mind, we can briefly consider some phases of construction and equipment.

Economy in Apparatus

In the planning and installation of the plumbing, heating, and electric work there should be no false economies. Without any exception, the planning of these vital adjuncts should be done with the utmost care by an architect who is thoroughly conversant with every requirement of an efficient installation. The lack of proper facilities for these three branches, their infinite variations, their proper installation and operation, are the most prolific sources of excess cost of maintenance.

We may well consider the operation of electric elevators and dumbwaiters in the ordinary institution. When of the automatic type, these preclude the necessity of an operator. Operators mean either limited service or the necessity for having an operator on the elevator night and day. A cost of even $10 per week for each such operator would amount to the interest on $8,000 per annum. If such an example were carried to its logical conclusion in each item of possible equipment it could be readily shown that

the expenditure per year for maintenance would be increased to an appalling extent. On the other hand if by properly planned and installed equipment a like amount could be saved, there would be involved in the percentage of saving the equivalent of a capital sum far in excess of the original construction or equipment cost. It might be stated with all emphasis that this would be a yearly saving, and the initial expenditure would in reality be an asset and revenue producer to that extent. Only a lack of knowledge of essential requirements in equipment and construction or a lack of foresight on the part of those concerned could be responsible for a policy which would preclude this desired result.



Brandon General Hospital at Brandon, Manitoba, as it appeared on September 1, 1921 (below) and as it was on October 1, 1921 (above). Stevens & Lee of Boston and Toronto are the architects.

As has been pointed out frequently, the difference of one cent per day per patient in a 100 bed hospital would be equal to the interest at six per cent on $6,000 and it is not incredible to believe that it would be a very simple matter to save in the proper construction and equipment a minimum of ten cents per patient day which would be the interest on the same basis of calculation on $60,000 per annum. This sum would be acceptable as a very nice endowment for almost any 100 bed hospital. By the remodeling of service departments the writer has saved as much as 50 cents per patient per day over previous cost.

The difficulty seems to be that those interested in building hospitals are somewhat hypnotized by complicated apparatus and methods of construction, because promoters and material and equipment dealers promise service which will practically eliminate the human equation and prove itself foolproof. Men who bring forth such futile arguments to sell apparatus and material are easily detected by the initiated and should be discouraged as dishonest.

Let us consider, as an example, one of the greatest necessities in a hospital, the signal system for calling nurses. Practically a direct system can be installed which merely consists of an electric light over the door or bed or both, operated on the ordinary 110 volts by simply pulling the cord attached to a toggle switch at the head of the bed. In opposition to this simplicity there are all sorts of complicated apparatus with contraptions and extensions to the office of the superintendent so that he can keep check on the nurses. If the superintendent is "on his job," he most assuredly cannot be sitting in his office all hours of the day and night watching the signal system. That is not what the hospital authorities have employed him to do. Recently there have been installations of time clocks and stamps and other such apparatus, which have their specific uses in their place. Their place is not to keep "tabs" on the nurses and the rest of the help in the institution. No apparatus has been devised that will keep a dishonest or incompetent nurse, or any other employee, from "beating the clock." There is only one way to cure an evil of this kind, no amount of expensive and unnecessary apparatus will do it. This is merely an example of some of the items which make the cost of construction high and which in no way reduce the cost of maintenance, on the contrary, by their inevitable upkeep they increase maintenance costs. All sorts of such apparatus are "special" and can be replaced only by purchase from the maker. Here where it is feasible and of greatest benefit is a woeful lack of standardization.

Another concrete example might be given in the installation of a thoroughly equipped laundry.

While the cost of conducting such a laundry, the upkeep and maintenance of the machinery, the interest on the initial cost, and even a fair depreciation charge might be as great as if the laundry were sent out, still the time element enters largely as a matter of convenience. Laundry work "at home" invariably is less wearing on the linen than when it is sent out, and the amount saved on linen replacement would at least pay dividends. Instead of being a liability a properly planned and equipped laundry would be found to be on the other side of the ledger.

Many problems which involve the question of maintenance must necessarily arise in any institution. Occasionally it is necessary to increase the construction cost to correct certain conditions. It is infinitely better to take the "bull by the horns" and make necessary expenditures than to perpetuate a condition which by its prevalence has brought many hospitals into the limelight in an unenviable manner. The general public, while willing to contribute to the building of hospitals, is somewhat opposed to the high cost of hospital service and in many cases the seemingly unnecessary solicitation of funds for maintenance.

Hospitals in general have become popular but there is no reason why they should not become more so. The need at present is for more hospital service at a lower rate and this can only be obtained by having the cost of maintenance commensurate with the cost of service without the sacrifice of any essentials. If there was not such an insistent demand for lower cost hospital service, then there would be no need of reducing maintenance costs.

The San Mateo County Hospital building near Belmont in San Mateo County, Cal., in its present stage of development is shown in these two photographs. The completed structure will house 100 patients. William H. Toepke is the architect and R. G. Brodrick, consultant.

Some years ago one of the hospitals in the vicinity of Chicago had a maintenance cost of $5.25 per patient per day. At the same time the average for the United States was approximately $2.10 per patient day. When the situation had been thoroughly canvassed and analyzed it was suggested that it might be possible to make a saving of fifty to sixty cents per patient day provided the authorities would be willing to do certain remodeling, erect certain additions and put in necessary equipment at a total cost of about $100,000. This was to provide not only for the then existing institution of 100 beds, but was to be adequate for the maintenance and necessary facilities for a contagious disease wing of eighty beds, and a contemplated future addition of about 150 beds. Even with sufficiently extensive equipment to serve these two additional units fully, as is now being done, the authorities found at the end of the first year that the cost of maintenance had been reduced somewhat over $1.00 per patient day, which is the interest at six per cent on $600,000. In other words, it was conclusively proved that by the expenditure of $100,000 the hospital had not only provided for its future enlargement but it had what virtually amounted to an endowment equivalent to six times the amount of the expenditure and a clean slate at the end of the year instead of a deficit.

If such results can be obtained by additions to and changes in existing institutions it is not amiss to state that much more could be accomplished in institutions properly planned and equipped in the beginning.

Relation of Ideals to Cost

In all probability the most prolific source of high maintenance cost is due to a lack of appreciation of the vital fact that there are only two methods by which a building can be erected. Either the size and extent of the institution must be planned in accordance with the amount of money available, or, there must be sufficient funds at hand, or obtainable, to carry out the wishes of the committee or community hon-

The proposed Isolation Hospital for the town of Greenfield, Mass., as planned by Kendall Taylor & Co., Boston, architects.

estly and conscientiously. This subject of the relation of the cost of construction to the cost of maintenance is after all in the final analysis merely the old economic problem of buying as much as possible for the amount of money that you have.

Building committees unfortunately have a rudimentary idea as to the relationship between ideals and cost. No doubt this is most unhappily true of many architects. Both the unsophisticated client and uninformed architect begin by wanting everything and then when contractors, material men, and members of trade unions are through there is bitter disappointment. Immediately there is a drastic cutting down and application of false economies, scrimping, the playing of cheaters against each other, and the acceptance of second-rate and doubtful contractors with the result that the completed building has not only cost infinitely more than it should have but also has a maintenance cost that mounts higher and higher each year.

Sacrifice Necessity for a Fancy

Frequently committees and authorities of smaller hospitals when they are contemplating new or larger units want everything that they have seen in their futile junketing tours; very often they omit necessities in their insistence upon what they consider essentials. What would be essential in the average large hospital might be cumbersome, expensive, and absolutely unnecessary in the small hospital, although the latter with proper equipment might be doing the same class of work at the proportionate maintenance cost as the former. Fortunately a good hospital of any size, well planned, does not cost as much primarily as a badly planned hospital, and it must be evident that the maintenance cost would be considerably less in one properly, economically, and honestly built and equipped than one that has none of these essentials. This is as true of overplanned, fussy and expensive "show places" with extra equipment as of poorly planned institutions.

Cost of construction bears a direct relation to cost of maintenance in a hospital, in the same manner and for the same reason as it would in a factory or industrial plant. No sensible corporation, company, or individual would proceed to plan, build and equip a factory for any purpose in the manner that most of our hospitals are planned. It would be suicidal, as production cost would preclude marketing in competition, especially where the fraction of a cent is the difference between failure and success. A hospital has been designated as a workshop wherein human beings are mended and why not let it be then not only as perfect as it can be made, but let it be so planned and equipped that it may serve its purpose for rich and poor alike at a cost that makes it sought universally.

COMMITTEES TO INSPECT A. H. A. EXHIBITS

To develop the exposition at the annual convention of the American Hospital Association into a real educational feature and an aid in professional efficiency in hospital administration, trustees of the association have asked President George O'Hanlon to appoint five committees. These committees will represent building, general furnishings and supplies, clinical and scientific equipment and supplies, food and equipment for food service, and laundry equipment and supplies.

The duties and the instructions of these committees will be: (a) To be active in the selection of firms to be invited, to the end that the exhibits in their line shall present an exposition of all the very latest and most desirable items obtainable. (b) To combine the exhibits of two or more items of equipment or supplies whenever a combination is more instructive. Space will be arranged for this. (c) To inspect carefully and critically every exhibit in their field. (d) To report to a general session of the convention (not later than the second day) upon the exhibits in their respective fields, setting forth that which can and should be seen by delegates to the conference and expressing opinions of the committee or collected opinions in regard to important policies and principles in the selection and purchase of equipment and supplies.

DR. WILSON IS TREASURER OF A. H. A.

Dr. Robert J. Wilson, director of hospitals for the New York Department of Health, is the new treasurer of the American Hospital Association. Dr. Wilson succeeds Mr. Asa S. Bacon, president-elect, who resigned, as was suggested by the nominating committee, when he became ex-officio member of the board. Mr. Bacon's resignation was accepted by the trustees in a resolution expressing their appreciation of his services and their hope that he will again serve as treasurer after his duties of president have been finished.

DR. WINFORD H. SMITH GETS D.S.M.

The Distinguished Service Medal has recently been awarded Dr. Winford H. Smith, superintendent of Johns Hopkins Hospital at Baltimore, for services rendered during the war. Dr. Smith is credited with bringing many ideas to the office of the surgeon general which aided in the administration of the Medical Corps.

THE SMALL COMMUNITY HOSPITAL

By OLOF Z. CERVIN of Cervin and Horn, Architects, Rock Island, Ill.

HOSPITAL trustees faced with the problem of providing a new building will have many things to consider. If it is fortunate enough to have conducted a small hospital, even though it was only maintained in some former residence, it will have the advantage of its own experience and of valuable suggestions from superintendent and doctors.

The first question in a consideration of construction is how many beds should be provided for patients. A rough and ready rule has been evolved based on population which gives one bed to each 150 persons. This estimate should be based not only on the city population but on that of outlying small towns and the surrounding country. Just how much should be allowed for future growth will have to be determined after careful consideration of present conditions and prospects for industrial development.

To Determine Its Size

The character of the territory surrounding the proposed hospital will have a bearing on its size and equipment. If isolated and the distance to large centers where specialized hospital service can be had is great, it will be advisable to provide a hospital with many departments to serve all needs. Another factor is the nature of the prevailing business. Is it agricultural, commercial, industrial, or mining? If industry or mining prevails, more attention must be paid to surgery, and plans should include several operating rooms, one for emergency purposes. Wealth is a third factor to be considered. It is evident there will be more calls for private rooms and baths where the wealth is great than in a community consisting mostly of factory workers and laboring men.

After obtaining all possible data the board should determine how much of the hospital should be devoted to wards and private rooms, how much to medical cases, to surgery, to children, to a maternity department with delivery, labor and crib rooms, and to x-ray and other laboratories. It should be clear that it is better to permit nearby hospitals that are already well equipped to take care of certain of the above departments than to make an inadequate attempt to provide special services.

The location of the hospital in the city will have much to do with its popularity. To be well patronized it is necessary that it be accessible and reasonably near the center of activities and yet away from disturbing noises and odors. It should be on or near a car line. The ground should be high, airy and well drained and if there are trees so much the better for shade and coolness; the buildings look well when set off with rich foliage. Of course there must be access to public utilities, such as sewer, water, gas, and electricity unless a considerable sum is set aside to build independent plants. In these days of automobiles, the streets surrounding the hospital and leading to the city center must be paved, preferably with asphalt. In most cases a site should be selected which will allow the hospital to expand in the future even though the present outlook may not indicate growth.

A Consideration of Cost

After determining the number of beds and size, cost is the next consideration. Hospitals like everything else have had great variation in cost. Before the war it was safe to assume twenty-five to thirty cents a cubic foot for a fireproof structure. At the armistice it was about fifty cents, and at the peak (summer of 1920) it was approximately seventy cents. Present prices run from fifty to sixty cents according to grade and completeness. Few architects or builders look for lower prices for years to come.

The building may take any one of three well defined shapes, the simplest of which would be represented by the letter "I," a long rectangle, extending from north to south so as to give the best light to all rooms. Another shape would be represented by the letter "L," which while not quite so easy to arrange for sunlight in all rooms will be found to lend itself better to an attractive exterior appearance, especially on a corner lot. Many hospitals are built "U" shaped but these are larger and a fifty bed hospital would rarely be planned on this type, nor on the "H" and "X" plan, the latter two being especially adapted to larger institutions. But whatever the shape the building should be non-combustible, as near fire and smokeproof as possible.

It is quite likely that the hospital we have in mind will be erected rather distant from other buildings, and these of ordinary height. It should, therefore, be kept low, certainly not over two stories and basement in height unless in a downtown district where a site is expensive. It is difficult for even an experienced designer to make a small three-story and basement isolated building look attractive, especially a hospital building which should have the least possible of the institutional look about it. An interesting and practical though expensive plan is to arrange the oper-

ating suite in an upper and separate story, open on all sides and free from disturbance. It helps the appearance of the exterior. If there is a good slope of the ground, by all means it should be utilized to make the basement nearly as desirable as the main floor as far as light is concerned, excepting for a few rooms on the high part of the ground.

Centralization a Big Factor

In considering the details of interior arrangement three important factors demand attention. First, there should be centralization to allow for economy in the daily work that will have to be done. A few unnecessary steps each day multiplied by eight or ten people and then by 365 days for the year will make a serious sum total of miles. The stairs, the elevator, and ambulance entrance near it, the office, the nurses' station, the utility and the diet kitchens should be grouped as near as possible about the center of the building to allow quick communication. Although it is not so important and often quite difficult to segregate the various classes of patients in a small hospital, something should be done to accomplish this desirable object. Wards should be kept as far as possible from high priced private rooms. The children's and maternity department should be separated from the others, and of course the operating suite with its many rooms should be as sequestered as possible. If a ward is provided for children, it would be well to include a separate balcony or porch.

A third point in planning is a consideration of emergency periods when the hospital is taxed to its capacity and beyond. Some hospitals which have been planned for sixty beds have been so arranged that they have taken care of eighty without undue crowding. This can be accomplished by providing large solariums (which should always be a part of a hospital, since no

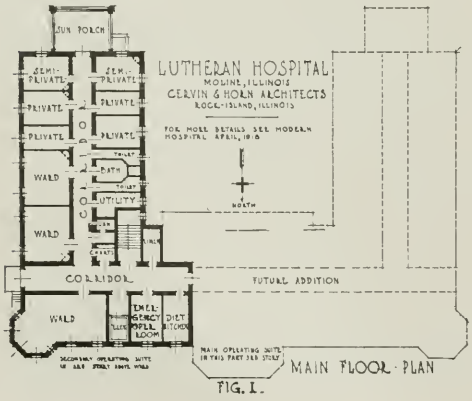


FIG. I.

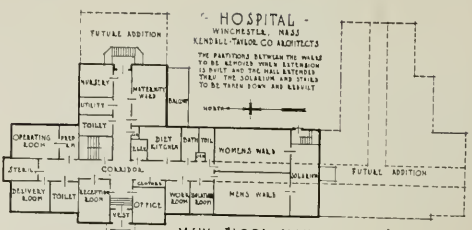


FIG II

factor is more appreciated by patients), so arranged that they can be used as wards. Some private rooms should be of such a size that in an emergency two patients can be placed in a room designed for one. Although wards should be small, not more than four or six beds at most, these can also be so arranged that one or more beds may be added. It has also been found possible to use the end of halls by closing off with temporary curtains, screens, or partitions with doors made of light materials, such as wall board. It is, of course, well to provide call buttons for these emergency needs, electric lights and proper ventilation.

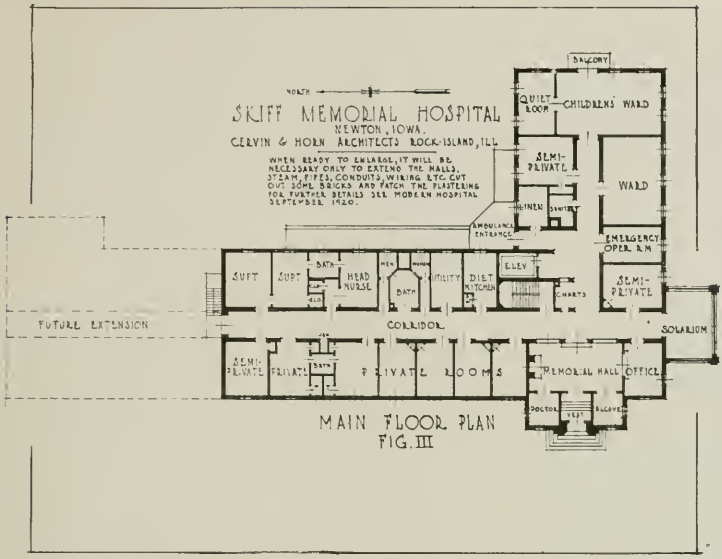
A point often discussed and still oftener overlooked or neglected is that of extensions to take care of future growth. It must be admitted that it adds to the immediate cost to plan for the future, since it is necessary to provide capacities of the heating plant, water supply, gas, electricity, storage and offices sufficient to take care of a larger plant. It is also desirable to provide more hall space than would be otherwise necessary, so the corridors can be continued without alteration of rooms. Nor is it easy to design a building that will look complete and yet allow for extension without marring the present lines. Nevertheless, in most cases none of these objections should prevail against planning for the future.

Planning for the Future

There are at least four ways of taking care of the future.

The first was adopted by the Lutheran Hospital in Moline, Ill., and is shown in Fig. I. The entire building was planned, and then one section built as shown, it being arranged so as to involve a minimum of remodeling to complete the structure. An old residence is now used for kitchen and administration purposes and to accommodate some of the nurses. It is connected with the new building by a bridge; the new structure is thoroughly protected with automatic fire doors and fire walls against the hazard of the frame residence. Notes on the plan indicate operating arrangement.

A second method is illustrated with outline



MAIN FLOOR PLAN
FIG. III

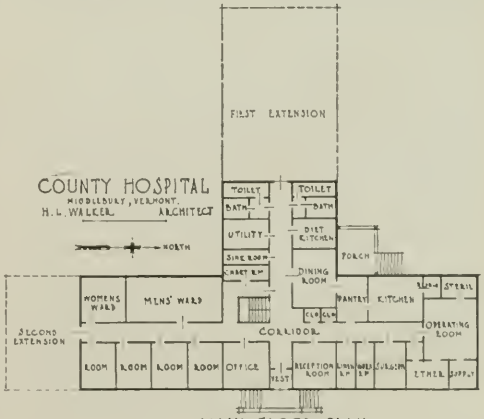
plan of the hospital at Winchester, Mass., (Fig. II). The architects of this building plan that when the extension is built to the south the partition between the men's and women's ward will be removed and the corridor lengthened. Addition can also be made to the east, as shown by the dotted lines. The stairways are so built that they can be taken apart and re-erected. It is well so to plan that extensions can be built with the least possible disturbance of the interior. This is done in the Skiff Memorial Hospital at Newton, Iowa, (Fig. III), where it will be necessary only to take down and re-erect the fire escape. A community hospital at Middlebury, Vt., illustrates the same point, with a possibility of extension in two directions (Fig. IV). Note how the halls are planned to run through to the end of the present building in the latter two hospitals.

A third manner of providing future additions is illustrated by a typical twenty bed hospital. (Fig. V.) The design of this plan is similar to those already described but two more additions can just as well be made as suggested by the writer of this article, permitting the present sun porches to remain as connecting porches. This plan is the pavilion type. It lends itself very well to exterior treatment.

More often used for larger institutions is a fourth method, a plan of entirely independent buildings with or without covered passages. Underground connections through tunnels, of course, are highly desirable to take care of steam, water, gas, and electric pipes as well as to provide communications between the basements. This is illustrated by Fig. VI, a hospital group planned on the pavilion system and suggested by the writer as typical. The order in which the buildings would be erected is indicated by numbers. Such a plan would be desirable where land is plentiful and the climate is warm.

How complete in its departments the community hospital shall be, that is, if any community hospital can be complete, will have to be determined by the individual circumstances. The word completeness is often used in too loose a manner, for, like perfection, completeness can only be approximated. Even the most highly specialized hospital, richly endowed, will find that there is room for improvement and additions.

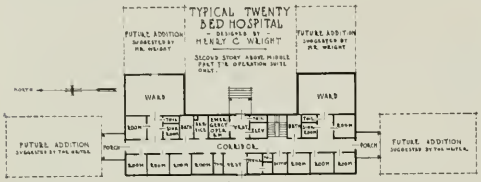
First there will have to be a kitchen with the best apparatus for refrigeration the purse will allow, together with convenient storage rooms. The need of the kitchen no one questions. There will, however, be some difference of opinion as to the need of a laundry. The experience of most superintendents would strongly favor a mechanical laundry equipment, though it be small, with drying and ironing facilities. The public laundry is seldom satisfactory and in the long run expensive, although it must be admitted that it is also costly to operate a private laundry. Nor



MAIN FLOOR PLAN
FIG. IV.

is it always possible to get hospital work done in a commercial laundry; few cater to this kind of work.

Whether an isolation department shall be included or not will have to be considered. At times it is necessary to isolate at least for a period of observation. In these days of prohibition the use of the isolation room for D. T. patients is



MAIN FLOOR PLAN
FIG V.

becoming rare. The objections to having any case in the hospital of a contagious nature are many, but unless special buildings are provided in some other place, it would seem cruel to have no provision for such emergencies. If determined upon, an isolation department should have an outside entrance and should be as complete as possible, so as to be independent of the rest of the hospital. On the subject one experienced superintendent writes:

"In most communities there is an occasional outbreak of contagion, or at any rate there are usually a few such cases to be found. There is no better place for the care of these cases than the hospital, for it is through the means of careful isolation that the disease may be held under control and an epidemic averted. In an isolation department, walls should have a durable finish of enamel which will permit thorough cleansing by the use of strong disinfectants. Special attention should be given to the elimination of as much piping and unnecessary fixtures as possible."

Accommodation of Nurses

Some community hospitals provide a dispensary or an out-patient department, and no doubt this is a step in the right direction. There should be a separate entrance to this department, so that the regular patients may not be disturbed.

Nurses are occasionally housed under the same roof with the patients, and in planning accommodation it will be necessary to provide a suite for the superintendent and a commodious room for the head nurse. A bathroom may possibly be used in common. Besides the regular nurses, accommodations in the most quiet part of the hospital must be provided for the night nurses. Another room should accommodate the outside nurse as a place for rest and change of costume. A separate nurses' home is much to be preferred, so that these faithful workers will have a change of atmosphere when off duty.

As to the hospital help, opinion varies on whether they should be housed in the hospital. The tendency seems to be more and more to provide inside accommodation, since it conduces to regularity of hours. Rooms with toilet facilities should be arranged for the cook, women help, and the janitor. If the basement is high and dry and the windows are of good height, these rooms can be arranged there.

The Consulting Architect

A board which fully realizes the necessity of careful consideration of the subjects above mentioned will no doubt be glad to avail itself of the best talent that can be found for consultation and to arrive at definite conclusions before plans are made. If an architect, experienced in hospital work, cannot be obtained, it will be necessary to depend upon the hospital superintendent and the local doctors. They will have many good ideas but will very likely not be able to interpret them and still less to express them with lines on paper. It is now possible to secure the services of consulting architects of wide experience, and of hospital consultants who have developed from practicing doctors into this specialized field.

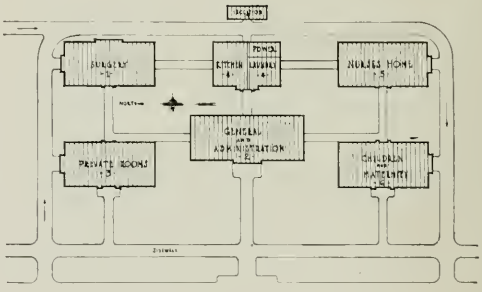


FIG VI

If sufficient grounds surround the building, it is to be hoped that a skillful landscape architect will be called in to improve the natural setting. If the architect and landscape gardener may be given opportunity to work together from the beginning the results will be infinitely more satisfactory.

A later article will go into some of the details of the small community hospital building and its arrangement.

"Skill enables a man to deal with the same circumstance that he has met before; scientific thought enables him to deal with different circumstances that he has never met before."—Dewey.

THE ADMINISTRATOR'S PART IN HOSPITAL PLANNING

By A. L. BOWEN, Former Superintendent of State Charitable Institutions, Department of Public Welfare of Illinois, Springfield, Ill.

On the grounds of a state hospital one can find as many architectural strata as there have been political architects since its establishment, says Mr. A. L. Bowen. He does not attach the blame to the architect but rather holds guilty the superintendent for the "gloom and misery prevailing in the architectural motifs of state hospitals."

"The gregarious instinct among state hospital administrators eradicates slowly," Mr. Brown remarks. He recalls the old superintendent, who, trying to operate a cottage institution from his swivel chair, was bemoaning the evils of the day which separated him from the old hospital in which he could "visit any ward in his stocking feet."

HOSPITAL buildings twenty-five and thirty years ago "just grew." They remain with us today and are occupied because they are too good physically to dismantle but are very far out of date. When they were planned neither architect nor superintendent understood what was needed.

The hospitals built today are, for the most part, the embodiment of the ideas of the architect. Architecture has developed a specialty—that of hospital planning and building. Hospital administration and management have not yet taken the serious part in the development of hospital planning that they should take.

The hospital of the future will be the joint product of architect and administrator. Architecture has done its part. It has developed the specialty, as I have indicated, and is studying all the problems it has to deal with. It has even gone into the field of professional management because there has been such a dearth of administrators with a knowledge of what should be incorporated in new construction. The architect has given to the modern hospital its exterior style; he has economized on space within; he has shortened distances and installed equipment and devices that are labor-saving. The architect has reached the limit of his possibilities in hospital construction, unless we are to expect him to qualify as an expert in administration.

Hospital improvements of the future will depend, I believe, upon the hospital administrator. As a profession, hospital management is just emerging upon the scene. By cooperation with specialized architecture it can give us a better hospital than any we now have.

Professional Hospital Knowledge Rare

The absence of professional hospital knowledge is most clearly apparent in the state and federal service where administration as a profession is an almost unknown quantity.

The architect, called upon to plan a new state hospital for mental and nervous cases, for instance, is almost at sea. Even those who have specialized in general hospitals strike a new field and have to guide them only what someone before them has done.

For many years superintendents and boards in charge of these particular institutions have changed so often and have been subject to such political domination that little knowledge in the planning of new institutions or in developing the old has accumulated. The newest state hospitals are not enough of an improvement, from an architectural standpoint, over the old types to warrant any enthusiasm about them and even less improvement may be noted from an administration standpoint. The congregate institution has been discarded and cottages substituted, but the big unit still remains. An institution of three-story cottages, housing 150 insane patients each, is little better than the old style congregate institution.

I once traveled through nine northern states seeking new buildings at state hospitals or other state eleemosynary institutions. I wanted to get the latest ideas. Illinois was preparing to spend a large sum upon enlargements of old institutions and the erection of a new hospital. My trip was almost fruitless. I found very few superintendents who had given the subject much thought. Even the oldest and most experienced were not builders and left all such subjects to the state architect. They frankly told me they had no improvements to suggest and always left planning entirely to the architect. The result was that gloom and misery were still the prevailing architectural motifs of state hospitals. It could not be otherwise; architects followed what they saw, thinking of course, it was right.

The state architect, as a rule, is a short term political appointee. He wants to do something different from his predecessor. Hence I found on the grounds of these institutions as many architectural strata as there had been political architects since their origin.

Having little or nothing to work on and being determined to do something that none of his pre-

decessors has done, the architect with a commission to plan a building or institution is very likely to be guided by preconceived notions, by what he sees or by a very superficial knowledge gained by a brief experience.

An example will be timely.

Such a political architect fell heir to the job of building a new hospital for the insane. Until a few months before he started the task, he had not seen an institution of its character but he soon acquired ideas. Unfortunately his first advisers believed in an institution "all under one roof." Then again he had a lot of notions, hastily conceived out of what he had seen on several trips to state hospitals of the old type.

The congregate hospital is the ideal hospital for the employe. It suits the average superintendent and his staff and everybody else on the payroll. It is easier to manage and handle and requires less thinking. An old superintendent who was trying to operate a cottage institution from his swivel chair was bemoaning the evils of the day which had separated him from the old institution in which he boasted he "could visit any ward in his stocking feet."

It was such an adviser who put this architect up to drawing a freak institution, the object of which was to pack as many insane into as small quarters within the shortest distance of headquarters as was architecturally possible and "all under one roof." The gregarious instinct among state hospital administrators eradicates slowly.

Freak State Institutions

Final approval of his plans depended upon several men who had modern ideas as to the rights of the inmate himself. After long, heated discussion, they were withdrawn in favor of a pure cottage institution with plenty of room for recreation and the ordinary activities in which the physical man finds enjoyment, no matter how seriously he may be afflicted mentally.

This artistic building has been designed for the hospital at Milton, Mass., by Kendall Taylor & Co., architects.

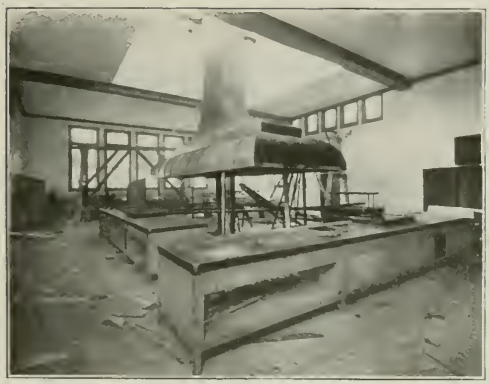
Another architect of very much the same type came to me one day with a wonderful discovery. "I don't like the 'T. B.' cottages that have been erected at the state hospitals, and I have devised one that ought to be an improvement. They tell me that the tuberculous ought to have plenty of sunshine, so I have planned a cottage to be made like a green house,—all glass." He was very much disappointed when he heard my objections and realized he could not build greenhouses to house tuberculosis patients.

These men were not to blame. They were sincerely trying to introduce improvements but they had no stock of knowledge from which to derive new ideas. The superintendents recruited from country practice, for political reasons, many of them never before in a state hospital, were not in a position to give advice or tell what these institutions needed. Thus it has happened that thousands of dollars have been wasted and little progress has been made in state hospital building.

Dining Room But No Kitchen

A state hospital is overcrowded. The legislature appropriates $100,000 for a new building. If the superintendent is unable to tell the architect what he wants, how may we expect the architect to know. Often the superintendent has not the faintest notion as to what type of patient the building should be designed to house. It does not occur to him that prevailing styles are enough to drive a man into melancholia. That ward buildings may be homelike and pleasant does not appeal to him. More than once in my experience I have found superintendents who were dumbfounded that I should think their buildings were hideous. Fifty thousand dollars were expended once on one building under such conditions. The architect located it a quarter of a mile from the main and only kitchen and congregate dining room. He provided a dining room in the building, but no kitchen or place where food might be kept warm and no way to get into it with food except through the front door. But he put in a laundry because the building was so far from the institution laundry. While it was designed for men, the plumbing was for women. It was located on the line of a public road traversed by street cars and hundreds of machines daily. The plans did not reveal these incongruities to the superintendent. The architect knowing nothing about the problems of the insane went at it blindly.

Perhaps such things have happened in the planning and erection of general hospitals and for the same reason. It is not my intention to criticise the architect. He has done more than his



The main kitchen of the new Service Building being erected at Alameda County Hospital at San Leandro, Cal., as it looks at the present time. This building is being constructed at a cost of $125,000 and is expected to be one of the most complete of its kind anywhere.

share. He has tried to develop a specialty but he can go only so far.

Rough Plans by Administrator

The point I desire to make is this: the plans for a hospital, public, general, state or federal, should be roughly drawn by an expert hospital administrator who is competent by study and experience to tell the architect exactly what he wants, what he desires to accomplish and how he expects to accomplish it. The architect's business is then plainly marked out. He should draw the plans as directed. He must fit the building to the site and design it within the funds available. He should know how to do what the administrator wants done and should be free to advise and suggest, even though he contributes nothing thereby. The direction should emanate from the administrator to the architect and not from the architect to the administrator. And in case of dispute, the administrator, if he knows his business, should be trusted to make the decision.

An industrial or commercial corporation desiring to expand its plant knows exactly what is needed,—a building of certain dimensions and height to take care of a certain production. The architect gets his instructions from the corporation and carries them out. It should be thus in the hospital world. No conflict between architect and builder is involved or implied. The architect retains his important and essential position. With the aid he should get from the expert administrator he would make few mistakes. I believe the crux of the whole subject of better hospitals is the professionalized administrator who understands hospital problems, who has a practical appreciation of what such institutions have been created to do and who has vision and imagination to see the possibilities and demands a long way ahead.

FROM A PATIENT'S DICTIONARY

A dictionary of hospital terms prepared by a thirty-two month patient is published in a recent issue of the *King's College Hospital Gazette*. Some of the patient's definitions follow:

"A hospital is a collection of corridors and stairs supported by slippery floors and contributions.

"A ward is a room attached to a corridor. It contains nurses, beds, patients, and fresh air in large quantities.

"A bed has longitude but no latitude. Its real duty is to beautify the ward. To disarrange a bed is a criminal offense. It is a far, far better thing to have a tidy bed than to be comfortable.

"A patient is the victim of circumstances—a conspiracy between the doctors and hospital authorities. After he has bided awhile he realizes why he is called a patient.

"A nurse is essential for the proper running of the ward. Her chief duty is to watch patients in order to wake them when asleep.

"A clinical thermometer is a morbid cold-blooded instrument which requires a hot-air bath twice daily. The radiant heat necessary is provided by the patient.

"A chart is a piece of paper clipped to a board hanging on your bed. It is provided so that specialists can play noughts and crosses with the students. Has often been mistaken for an underground railway map, but is really the life story of a thermometer set to music.

"The medicine cupboard contains brandy and castor oil. Tremendous quantities of each are used. The brandy is used to camouflage the castor oil and is also used as a restorative when patients feel faint. No patient is ever allowed to feel faint!

"Screens are used by the nurses instead of Sandow's Developer and are considered part of their uniform when on duty. No nurse is allowed to take a screen with her out of the ward when off duty. Most screens do not screen.

"Night commences when blinds are pulled down—day commences when the night nurses have finished their midnight meal. Old patients sleep in the daytime—it is quieter.

"Lockers are a hospital version of dining-room sideboards. Always placed so that a patient cannot get at them, and really provided to gratify the nurses' curiosity. Lockers do not lock!"

RETIRES FROM ADMINISTRATIVE WORK

After thirty-five years in executive positions in the hospital field, Miss Mary M. Riddle, superintendent of the Newton Hospital, Newton Lower Falls, Mass., on January 1 resigned her position and has retired from administrative work. Miss Riddle is one of the best known woman hospital executives.

In connection with her duties as hospital superintendent, Miss Riddle was president of the New England Division of the American Nurses' Association; president of the Massachusetts Board of Registration of Nurses; treasurer of the American Journal of Nursing Company; treasurer of the Isabel Hampton Robb Memorial Fund; and was associated in almost all of the state and national activities of her profession.

A. H. A. ADMITS SIXTH SECTION

Favorable action of the American Hospital Association on the application of the newly organized New England Hospital Association makes the New England association the sixth geographical section of the national organization.

NEW AND PROPOSED HOSPITALS OF THE MIDDLE AND FAR WEST

An entire top floor and a maternity wing have been added to the St. Francis Hospital at San Francisco.

The foundation is in for the new Victory Memorial Hospital at Waukegan, Ill.

The new Elko General Hospital at Elko, Nevada, was erected by county funds

The Jane Lamb Memorial Hospital to be erected this year at Clinton, Iowa

THE OPEN WARD VS. SINGLE ROOMS

By EDWARD F. STEVENS, of Stevens & Lee, Architects, Boston and Toronto

PERHAPS it was war conditions which gave big wages and overtime to the artisan and to the common laborer; or it may have been the general uplift of the human race that was responsible for the demand for better living accommodations, better food and clothing, and even better hospital conditions—smaller wards, more private rooms.

The old twenty- to thirty- and, as in some of the war hospitals, 100-bed wards have gone, let us hope, forever. But how, in the much desired private room hospital, are we going to meet the economic conditions of nursing, feeding and general administration which obtain in the open ward? It is evident that we must find some middle ground where the patient may have much of the privacy of the single room with the economic efficiency of the open ward.

While it is ideal to think of a hospital for rich or poor with everyone occupying a private room with private toilet, as in the modern hotel, the conditions in the case of a sick person going to a hospital for treatment are not comparable with those of a well person going to a hotel for a night's lodging. The sick patient is generally helpless and needs diligent care and watching, which care cannot be as economically given in single rooms as in open wards. Even if the expense is disregarded, the supply of nurses and attendants is not adequate to the present demand.

"The Private Room Appetite"

The great intermediate class of patients who, with the "ward pocketbook," are acquiring the "private room appetite" must be cared for in such a way as to afford privacy to the patient and economy in cost and administration of the building.

It is very evident that the small private room with the integral toilet and watercloset in one corner not only would add tremendously to the cost of the building but, being placed away from the outer air, would prove to be unhygienic and would be prohibited by the building authorities of most cities and large towns; the private room, with the toilet opening to the outside air, would occupy valuable space. So it would follow that some form of ward must be used for public and intermediate classes of patients.

The separation of patients by room, partition, or screen is one of the prophylactic essentials that the war has shown us; for, as one of the great pathologists remarked in regard to the 100-bed wards planned by the government: "If one of those patients contracts a communicable disease, I will guarantee that ten per cent of the men will *die*." So the first essential is separation of beds in the ward.

Segregation for social or religious reasons, or on account of character of disease, age, or sex is desirable. This would mean that our units should be small.

Sub-Sink Rooms Between Wards

Conservation of the time and strength of the nurse requires that nearby facilities be provided for the securing of water, the emptying of the bedpan, etc., for it is known that these calls are the most frequent. This can be accomplished by providing sub-sink rooms adjoining each of the small wards, one room for two wards. This gives all the advantages of the private toilet and takes a minimum amount of room. With a wash basin in every ward, with utensil hopper and sterilizer between each two wards, and with the watercloset opening to the outside air, the patient, as well as the attendant, has the utmost facility with the minimum amount of travel.

Then with the subdivisions between the beds of three and four or more bed wards, the ward patient would have practically the privacy and comforts of a private room, with a minimum cost of construction and maintenance.

The quiet rooms or private ward essential for every ward unit could be provided with a common toilet with special bedpan-hopper watercloset.

With wards planned as described, each patient would have the maximum amount of air and light, freedom from contact with other patients, and the advantage of a private toilet.

One bathroom, a general sink room, linen room, serving kitchen, and perhaps a surgical dressing room would complete this ward unit.

To illustrate this article, the floor plans of one of the units of a hospital in the South being planned by the writer are used. The kitchen and the administration and operation sections are in other parts of the group, and the food is to be brought to the serving kitchen or to the patient's bedside in heated or vacuum carriers.

Wards Divided in Units

In each of the ward sections, which may contain three or four or more beds, the partition separating the beds, depending upon the classification, may go either to the ceiling, making prac-

tically separate rooms, or to a height of seven feet, with a one-foot opening below, thus giving the complete circulation of air of an open ward. In each unit there is a wash-basin with mixing

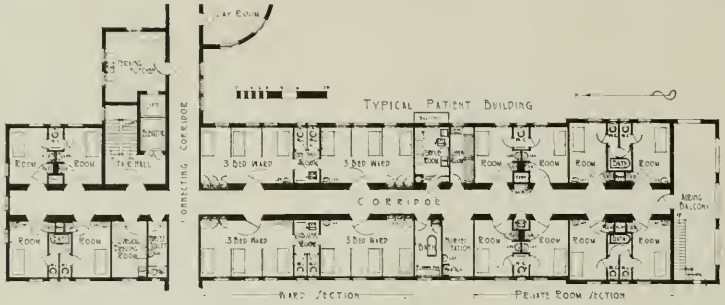


Fig. 1.

wrist-control valves, lockers or closets for the clothing and effects of each patient, and between each two wards a common toilet or sub-sink room, providing the minimum distance for the nurse to travel in discharging her duties, each nurse being able to have general surveillance of two of the ward sections.

A treatment of the private room and the private section is shown in the accompanying plans (Fig. 1). A common toilet is placed between two private rooms, and privacy is maintained by the use of a special locking device such as may be found in European sleeping cars. The opening of one door automatically locks the other, insuring privacy. The closet used will be of special type for emptying and washing bedpans, in this way simplifying the service. Each room will be equipped with lavatories, nurses' calls and telephones, general and bedside lights, and a built-in clothes closet through which the room will be ventilated.

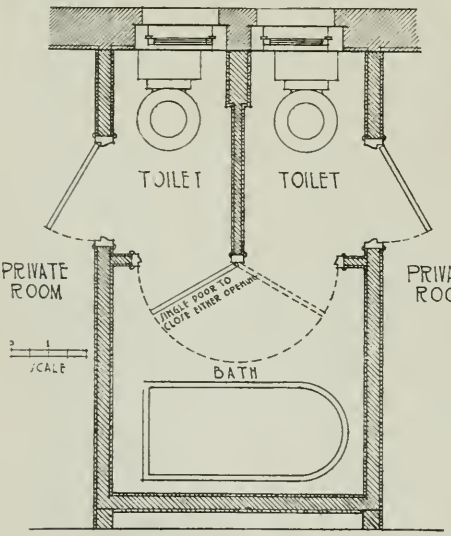


FIG. 2

Facilities for Private Bath

While the bathtub is used little by the average patient, suites of rooms with bathtubs give opportunity for the individual bath when desired. To make these private suites more flexible and at the same time enable members of the family to occupy adjacent rooms, one economic feature here shown and one which the writer has used in a number of hospitals is the form of door used in closing the watercloset from the bath. This form of door always gives outside light and air to the bathroom. This is accomplished by using a single door to close at will either one of two openings, as needs require, always providing a watercloset for each room and leaving it optional to assign the bath with either room. This device is shown in Fig. 2.

A general sink or duty room should be provided in each unit, where the needed preparation, sterilization, etc., can be done.

With the individual cubicles and rooms, the need of a surgical dressing room is slight. With the portable hot table, the size of the serving kitchen can be reduced.

The saving in area over the single and integral toilet which in most large centers *must* open to the outer air is very great. With the three-bed ward here shown, the saving in area of room occupied by patients would be about twenty per cent over that of the single room with connecting bath, and the saving in construction would be even greater. The efficiency of administration would be equal to that of the ward, and the privacy would be nearly equal to that of the private room.

PLUMBING ECONOMIES

By H. A. DURR of H. A. Durr & Company, Consulting and Designing Engineers, Chicago

VERY few doctors or boards of directors planning to build a hospital realize the cost of the mechanical equipment which will be required to aid in making their proposed hospital habitable, comfortable and sanitary. The cost of this equipment is often 35 to 40 per cent of the cost of the total building project, and the biggest single mechanical equipment item is the plumbing installation. This item of plumbing is accordingly one of great importance and is worthy of much consideration. It is not uncommon for a plumbing installation to cost as much as $25,000 in a hospital project totaling $250,000 to $300,000. Because of this high cost, great care should be exercised in settling on the plumbing equipment and every possible saving should be given consideration.

In the first place, considerable money can be saved by engaging the best mechanical engineering talent to develop the plumbing layout, secondly, the architect should be requested to do his utmost in planning the hospital building to permit of a simple installation of plumbing piping. For example, the receiving department, which requires more or less plumbing equipment and is usually located on the first floor of a hospital, should be so placed that the stacks of piping required for it would accommodate plumbing equipment on the floors above. Of course it is not always possible to locate all departments in a hospital so that those requiring plumbing fixtures will be placed vertically above one another, thereby requiring a minimum number of plumbing risers, but there is no question that considerable saving could be effected if the requirements of this rule were given more heed.

Sanitary or plumbing codes prepared by the different city and state authorities invariably refer to waste pipe and vents but rarely to water supply. Abundant and good water supply is essential in any hospital and oftentimes to make sure of providing sufficient water, the tanks, hot water heaters, piping and other water equipment are installed larger than need be, thereby increasing the first cost of an installation. This, of course, can be obviated if plans are fully developed by competent engineers.

Piping Layout Should Accompany Plans

After the architects have determined in a general way upon the hospital plan for each floor, a mechanical engineer should start laying out a pipe riser diagram and, with the aid of this, discover whether the locations of some of the plumbing fixtures could be restudied and changed so as to obtain a less expensive piping layout. This scheme of procedure will often give the owners a hospital that is simpler and cheaper and at the same time better because of less bends and fittings in the piping that may clog up and cause future trouble.

The mechanical engineer should next develop a complete set of piping plans showing the layout in detail and on this plan should indicate everything possible for the two-fold purpose of getting all quotations based on exactly the same requirements and at the same time make it possible for plumbers to prepare an intelligent bid by leaving nothing to be guessed at, thereby eliminating any sum which might be included in the proposal to cover contingencies.

If the plumbing layout is worked up in detail a vast amount of the specification work can be eliminated. A plan is supposed to be a picture for the trained mechanic and pictures invariably portray more to the average person's mind than volumes of typewritten specification. Great stress should accordingly be laid on the development of complete mechanical plans in addition to the architectural plans and with these the plumbing specification on a hospital project can be greatly shortened and simplified. Good mechanical plans are also invaluable after the building work is completed for most of the piping is run concealed in walls, furred spaces and partitions where it is impossible to see the service piping. It is a very expensive matter to repair piping defects three or four years after a building is finished unless such plans are available. Thorough drawings not only lessen the first cost but the repair charges as well.

Pipe Shafts Should be Provided

Plumbing specifications can be simplified if a little space is allotted for pipe risers. As it is now, in most new projects there is practically no space given over to piping and it is supposed that every bit of it will be concealed in partitions. If pipe shafts and pipe chases of reasonable area were provided in a hospital, it would be unnecessary to install every piece of plumbing material with the same degree of accuracy that is resorted to in many buildings as designed today, and on top of all, a little clear space would be left around the pipe risers so it would be possible to get at them if repairs were required. In many institutions now, where fireproof construction is employed, it is impossible to make repairs without

excessive cost and annoyance owing to the cramped condition of pipe services. Pipe services in a hospital are much like the arteries and veins in the human body, they must remain in service continuously if the structure is to function properly.

Where pipe shafts are provided, another saving can be effected. The water service to each bathroom can be controlled by two valves, one for hot and one for cold, while with the scheme regularly employed five valves are installed, two valves for the bathtub, two for the lavatory, and one for the closet. Practically the same degree of control is obtained with two valves at much less cost.

Some Unnecessary Fixtures Enumerated

In the better grade of hospitals where toilet rooms are required for each private room, there is no need of providing separate bathtubs for two adjoining private rooms. Tubs are used but little anyway and one tub will suffice for two rooms if laid out with doors from the bathroom leading into each of the private rooms, as shown in the accompanying sketch, marked "A." Two separate toilet rooms with their individual lavatories should be provided as shown. The elimination of 50 per cent of the private room bathtubs not only effects a saving in fixtures but also a saving in the size of the hot water heaters, tanks and piping. Smaller equipment can be used throughout, for the maximum demand for hot water at any one instant is greatly reduced.

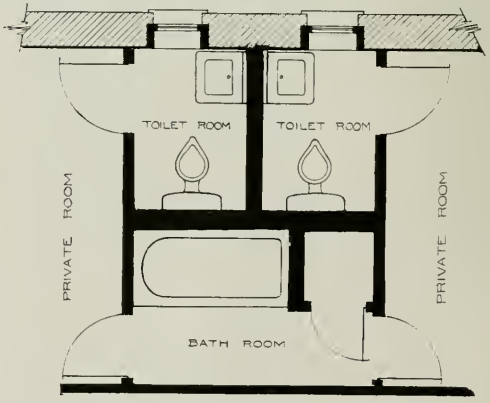
Urinals are as unnecessary in the average private hospital as they are in a private home, yet they are very often installed. A porcelain urinal stall is not a cheap fixture by any means, with depressed floor construction, drain and water supply. There is always a great number of closets in a hospital and with them a urinal merely adds to the cost of a plumbing installation, takes up valuable floor space and adds nothing to the usefulness. In public hospitals and large sanatoriums where large public toilet rooms are required, a urinal might be of some value, but these are practically the only places.

Individual Vent Pipes Not Essential

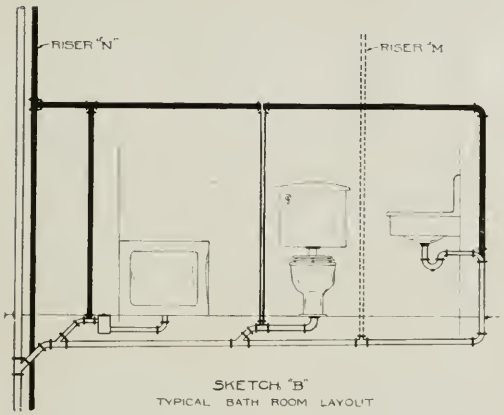
The great majority of hospitals are less than six stories in height and in such buildings it should be unnecessary to use individual vent pipes from each fixture as is now required by ordinance in some of the large cities. This rule of individual venting is possibly desirable in tall buildings where there is a chance of a slug of water dropping from a great height and attaining sufficient velocity to create a considerable suction on the water sealed traps connected with the fixtures on the lower floors. It is presumed that this suction will syphon the water out of the trap on a fixture and permit sewer gas to escape into the rooms until the fixture is again used and the trap again sealed with water. This rule of individual venting is strictly enforced in some of the large cities, including Chicago, while in numerous other cities, including Detroit, they do not have such a rule and neither do they have any trouble in the average height of building from sewer gas because of the breaking of water seals. The Henry Ford Hospital in Detroit is not provided with individual vents. If the same building were erected in Chicago the extra vents would be required, thereby necessitating a probable additional plumbing cost of over $15,000 for this one item. If such an ordinance is unnecessary in one city it is also unnecessary in another. There is no question in the writer's mind but that individual vents in a building six stories or less in height are not only a luxury but a non-essential item. The relative amount of piping and fittings required to satisfy the two city ordinances are shown in sketch "B" where the main vent risers "M" and "N" would be almost identical. Riser "M" shown in dotted line with its short connection to the drain pipe would be required in Detroit, while Riser "N" with the multitude of individual vent connections to each fixture, all as shown in heavy line, would be required in Chicago.

Standardization of Plumbing Ordinances

From the above data it can readily be seen that much can be done in the standardization of plumbing ordinances. It is unfortunate that more has not been accomplished to establish uniform rules for all cities and states, which would combine and coordinate all local ordinances, mak-



SKETCH "A"
TYPICAL FLOOR PLAN



SKETCH "B"
TYPICAL BATH ROOM LAYOUT

ing exceptions only where imperative to accommodate peculiarities in certain localities. With uniform rules and standards throughout the country, it would be possible to use plumbers from any city in any other city in case of shortage of men, without fear of them making a mistake owing to some peculiarity in the local ordinance or code. Uniform rules would aid greatly in cheapening a plumbing installation.

One of the most expensive and practically useless devices in a fireproof hospital is a fire pump. The corridors and stairways in a fireproof hospital are unlike those in the average hotel, for carpets and rugs are never used in them. In fact, there is nothing in a fireproof hospital that can burn except small rugs, the window curtains, and bed and table linen. If such material did burn, the fire could be put out or at least controlled by the use of fire extinguishers or buckets of water long before a fire hose and pump equipment could be placed in action. The cost of the fire hose, stand pipes and pump equipment in a large hospital involves a tremendous sum of money.

A saving which is rarely ever taken advantage of can be made by eliminating all pipe covering and tank insulation work from the plumbing specifications. The application of insulating materials to any piping system is handled by a special group of workmen in most cities and is a trade in itself. If handled by the plumber he must sublet the work to this particular pipe covering trade and, of course, add a carrying charge of possibly ten per cent above the quotation made by his sub-contractor. This insulating work for the plumbing equipment can be let, along with that required for the steamfitting and refrigerating equipment, direct to a contractor handling insulating work exclusively. This will automatically eliminate the ten per cent carrying charge above referred to on not only the plumbing but the steamfitting and refrigerating pipe covering as well.

Difficult to Reduce Fixture Cost

In a $25,000 plumbing installation the fixtures themselves for the average hospital would probably cost $8,000. This is the largest single item which goes to make up the total plumbing cost, and unfortunately not a great deal can be said about reducing it. The cooperation of the doctors must be obtained in regard to the elimination, simplification and standardization of certain plumbing fixtures. Many doctors think of the plumbing fixtures the same as they do of the instruments in the operating department. If a special instrument will aid materially in making it possible to handle a surgical case more quickly or better, that particular instrument is purchased. In looking over a list of plumbing fixtures for a new hospital, the same line of thought is invariably followed.

Standardization of trimmings for fixtures will result in economies, but to accomplish this, doctors must standardize on their requirements. For example, in some hospitals water for certain lavatories will be controlled in three different ways in the different parts of the building, in addition to being controlled by means of standard faucets in other locations. In one location knee-acting control will be provided for the faucets, in another elbow-acting, and in a third, foot-acting. The installation of these three types of control means that the plumber must spend considerable time familiarizing himself with the manner in which each should be installed, in addition to seeing that the floor or wall construction be arranged to suit the varied requirements. The prime need of any of these three controls is to eliminate the necessity of soiling or contaminating one's hands by using them to operate a faucet or vice versa. Any one type of control will do,—why not pick out the one requiring the least in the way of repairs?

Class "A" Fixtures Not Essential

In nine cases out of ten a single sentence is placed in the average plumbing specification stating that fixtures shall be Class "A." This is done from force of habit, but a man trained to economize on the various hospital projects he handles will require Class "A" fixtures in the operating departments and other important sections of the building, but permit Class "B" fixtures in the less important locations where it doesn't make so much difference if a fixture has a blue mark, a slight blemish or a warped surface.

There are other minor economies which can be

made in fixtures and trimmings, but the big saving on new construction is to be made in the service pipe and general layout. Real study should be given to the layout of this material so as to use a minimum amount of it, run in the most direct manner possible. Every unnecessary foot of service piping installed means an unnecessary foot of pipe insulating material, which is also expensive.

In addition to these various items, the doctors or boards of directors planning to build a hospital should bear in mind that it is much cheaper to indicate piping on drawings in an engineer's office than it is to have a plumber actually install the piping in a new hospital and, when it is discovered that it interferes with some of the material installed by other mechanics on the building, upon order tear it down and send in a bill for extras.

The hospital board should select simple, strong and easily repaired brass trimmings for plumbing fixtures and endeavor to use as few of the special vitreous and porcelain fixtures as possible. It should spend a small amount of money to have plumbing and all other pipe systems laid out by engineers trained in the design of hospital structures, and save money on the total cost of the plumbing installation.

SOME ESSENTIALS OF HOSPITAL PLANNING AND CONSTRUCTION

By GUSTAVE W. DRACH, Architect, Cincinnati, Ohio

On the multiple considerations which confront hospital administrator, trustee and architect when visualizing a new plant, Mr. Drach, a Cincinnati hospital architect, touches briefly in this article. From selection of site through the mazes of planning and construction, Mr. Drach from his store of experience points the way. His generalizations are made to apply in most cases to the problems which vex the builder of both the small community hospital and the lofty metropolitan institution. At equipment the architect withdraws from the field with the observation that what in equipment seems ideal when hospital construction is begun is apt to be antiquated before its completion.

THE first consideration in building a hospital is the site. Great care should be taken in its selection. Grounds must be sufficiently large to give ample space for air and light, and the structure must not be crowded between other buildings so as to prevent the sunlight from entering every room at some time during the day. Courts and light wells must be avoided. The question of thorough drainage is also not to be overlooked when selecting a hospital site.

Building plans should give the administrative department a central location, thereby reducing to a minimum the distance between the different parts of the hospital and saving much time and energy. Provision should be made for a separate entrance at the side or rear for ambulances, supply trucks and other vehicular traffic which would be objectionable in the front of the building. Proper accommodations must be made near this entrance for the examination of patients. An elevator of size sufficient to accommodate a bed or stretcher should be provided for near the receiving entrance, so located as to be convenient to wards, operating rooms and roof garden, if the latter is contemplated. A receiving room for supplies and parcels should be located close to this entrance, with proper storerooms for supplies. Public halls, stairs and elevators should be placed conveniently close to the administrative department and wards and should be enclosed with fireproof walls and provided with fireproof doors, so as to reduce the fire risk and eliminate traffic noises. If the central hall leads to cross halls, then wards should be cut off from the cross halls with fireproof doors.

In addition to the general administrative offices there must be an information desk, waiting rooms, consultation room, a room for the physicians provided with accommodations for hats, coats, etc., an office for the head nurse, and public toilet rooms for men and women. If the hospital is in the South, separate waiting rooms must be provided for colored people and separate service arranged throughout for them. The hospital must, of course, be so planned that the different services are conveniently located with relation to each other, the medical, surgical, dermatological, neurological, orthopedic, obstetric, pediatric, etc.

Open wards should allow about 1,200 cubic feet per person, and their design should permit the arrangement of beds so that the light need not shine in the patients' eyes.

Toilet rooms should connect directly with the wards and should have outside light and ventila-

tion. The bathroom may adjoin the toilet room and be connected with it. Several small single rooms for isolation purposes must be provided for close to the ward. Nurses' stations should be located near the entrance of each ward.

Diet kitchens must be of ample size to accommodate the service and so located as to be of easy access to the main kitchen, wards and private rooms.

Sanitary Equipment for Private Rooms

Proper provision must be made for storing patients' clothing, either adjoining each ward or near the receiving entrance. Where there are private patients, the private rooms will have closets. Rooms for linens and blankets, bandage and rubbish disposal, slop sinks, mops, brooms, bed pans, small sterilizers, and similar equipment just outside the wards must not be forgotten. A workroom for nurses for each ward is also very desirable.

Where a number of private rooms are arranged for, it would be well to have some with private baths and practically all with toilets and lavatories. All private rooms should have lavatories with hot and cold water. Several of these rooms should also have sitz-baths.

Each ward should have a solarium open on three sides, enclosed with sash so that it may be closed and heated in cold weather. It must be of sufficient size to accommodate a number of beds, depending upon the capacity of the ward. The solarium in a ward containing only private rooms is readily converted into a desirable day room for convalescent patients.

If a roof garden is provided, part of it should be roofed over and enclosed with glass doors which may be opened or closed as weather conditions may demand. Provision must also be made for toilets and lavatories and a small serving kitchen. One elevator of sufficient size for a bed must run up to the roof garden.

Operating Room Requirements

Operating rooms should have north light and be directly connected with a sterilizing room, and in larger plants with an instrument room. There should also be anesthetizing rooms and recovery rooms, a nurses' workroom for making bandages, and a room for the nurse in charge. A plaster room is also necessary. Smaller operating rooms should be designed for special work, such as cystoscopic, eye, ear, nose and throat operations. The floors and walls should be of some impervious material, preferably tile of a vitreous nature. Although it has been customary to use white tile, a tile of pale green has proved very satisfactory in that it is soft and lacks the glare of white. A small laboratory in connection with the operating rooms is desirable. In the operating pavilion must be a locker room, clean-up room, showers, toilets, dressing room and waiting room for the surgeons.

The maternity ward should be isolated as much as possible from the other parts of the hospital. A separate pavilion or building would be desirable. In planning a maternity ward, the delivery room, creche and clean-up rooms should be separated as much as possible from the open ward or private rooms, to eliminate undesirable noises from these rooms.

If a pathological laboratory is contemplated, it should consist of one large laboratory, a small one for special work, and a record room. The x-ray room, with its record rooms, lockers, toilets and bathrooms for the physicians, and the drug room, could be placed in a wing with these laboratories, in which case a central location must be chosen, yet one sufficiently isolated from the wards.

The kitchen must be centrally located and in close proximity to the elevators or carriers leading to the diet kitchen and to the storerooms from which supplies are drawn. It should have direct access to the outside, should be well lighted and ventilated, should have impervious floors with drains, and walls of some hard, smooth material.

Accommodations for Staff and Employes

Dining rooms must be provided for nurses, doctors, interns and employes. The location of living quarters for superintendent, nurses and interns must depend largely on the size of the plant. A separate building for the accommodation of nurses is ideal; in any instance they should have at their disposal a large study room, diet kitchen for lectures and demonstration, a gymnasium, ample living and reading rooms which can be converted into entertainment halls, and a storage room for trunks.

An assembly room is especially necessary in a large institution. Its uses are many: lectures, entertainments for nurses and convalescent patients, staff meetings, board meetings, and similar purposes.

The morgue, with postmortem room adjoining, should be located in the rear of the hospital, with access from the outside.

In a large institution it is most desirable to have the power plant in a separate structure connected with main building by means of a tunnel. This building can also contain the laundry, carpenter shop, paint shop, a large sterilizer for mattresses, and perhaps rooms for outside help.

The exterior of the hospital should be simple and dignified in design.

This, I think, gives in a rather broad way, without going into any minute detail, the funda-

mental requirements in planning a hospital.

Now as to the construction. To my mind every hospital building should be fireproof. Ample provision should be made for convenient exits; different units should be separated from main corridors, stair and elevator halls by fireproof walls and doors, and all stairs and elevators placed within fireproof walls or partitions. The floor construction, walls and partitions should not only be fireproof but also soundproof and verminproof. The interior finish should be very simple, woodwork eliminated wherever possible, door and window casing avoided. Doors are best solid without panels or mouldings, the severity of the plain surfaces being reduced somewhat by the introduction of a narrow flush inlay of a lighter or darker color, giving the effect of a large panel. The doors should be so hung as to fit close and prevent slamming, and of sufficient size to allow the entry of a hospital bed. The doors and windows, if possible, should be provided with transoms hinged at the bottom. Transoms over doors can well be made of wood or fireproof material instead of glass, thus avoiding the glare of the hall lights at night. Window transoms should have metal shields at the sides to prevent draughts. Sills should be of marble. Walls are best finished with hard plaster, all angles rounded, and painted with enamel of some warm, pleasing color.

How to treat floors has been a debatable question for many years and has not yet been solved satisfactorily. Floors should certainly be of a material which is non-absorbent and they should possess sufficient resiliency to make walking easy and noiseless. One of the most satisfactory solutions of this vexing problem has been the combined use of terrazzo with a sanitary base, the terrazzo extending several feet from the wall, and a tile floor of one of the cork preparations in the center, laid flush with the terrazzo. Linotile and various other makes of rubber tile have given good results. Linoleum, a less expensive material, has also given fair results.

Vitreous tile for the floors and glazed tile for the walls of bathrooms and toilets have probably given the best results, although terrazzo for this purpose has proved quite satisfactory in many places.

Plumbing fixtures should be carefully selected and of such a type that all parts are easily cleaned; they should be wall hung if possible. Supply lines should be of brass and of such proportion as to give ample flow. If waste and soil lines and drains are of sufficient size to do the work for which they are intended, stoppage can be eliminated; enough cleanouts must be provided for any emergencies. All pipe connections should come not through the floors but through the walls above the base. Bathtubs should be set directly upon the floor with no space under them and so placed as to allow the nurse, in handling the patient, to walk all around the tub. A series of the tubs should be arranged for continuous baths.

Care in the location of lights should be taken so that there will be no glare on the patient. The operating room lights ought to be equipped with double electric service, so that if a fuse blows on one line the other line will continue to do duty. Sufficient base plugs must be provided for local lighting for each bed as an aid to the physician as well as a convenience to the patient. The lighting system must be sufficiently elastic to allow the control of lights singly or in series from separate switchboards.

Silent signal systems must connect from the nurses' station to each bed. Telephones connecting the different departments of the hospital and outside lines must be provided in each nurses' station. It is also desirable to have plugs for portable telephones in some of the private rooms. An electric signal call for doctors and superintendent should be placed in the hall outside of each ward.

Arrangements for a doctor's register should be made at the information desk. Electric registers are frequently used in large institutions.

Problems of Heating and Ventilation

Heating and ventilating problems take careful study. A competent engineer should have charge of this important branch of work, especially in large installations, and a competent man is needed to operate the plant after it has been installed. Radiators of the type that can be set up from the floor and with parts easy to clean are desirable. They should be wall hung and protected so as to prevent patients from accidental burns. Risers should be concealed if possible, and long horizontal lines to radiators in wards, rooms and corridors eliminated. It is essential that all risers be accessible in case of a break or other accident.

The method of ventilating depends largely upon conditions. All toilet rooms, bathrooms, wards and kitchen ought to be supplied with fresh air inlets and air exhausts. Halls and corridors should have exhausts. Private rooms may be ventilated locally.

I shall not attempt to go into the equipment and furnishings of a hospital. These cover a wide scope of detail and improve so rapidly that many things which we think are perfect when starting to construct a hospital are obsolete and antiquated when the building is ready for equipment.

In this paper I have not attempted to give any special details, only to call attention to the essentials required in a hospital, some of which might be overlooked.

SUNLIGHT FACTOR IN PURCHASING PROPERTY FOR URBAN HOSPITALS

By RICHARD RESLER of Resler & Hesselbach, Architectural and Consulting Engineers, New York

THE purpose of this paper is to discuss briefly an important factor that arises for consideration in purchasing property for hospitals located in cities. Effort will also be made to caution hospital executives who contemplate the purchase of such property to avoid the all too frequent mistake of acquiring land which, on account of sunlight restrictions, is totally unsuited for city hospital purposes.

Usually in the lay mind a parcel of land suited for a hospital in the city is one having sufficient area and so situated to permit the wards to have southern exposure.

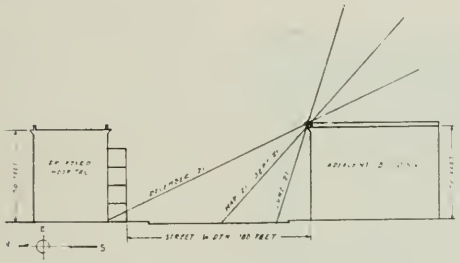


Diagram 1.

However, in city hospital planning these considerations of site area and orientation are by no means conclusive, as adjacent high buildings frequently develop an artificial sky line which on account of light obscurations makes the property impractical for housing the sick, even though the other factors such as approachability and future expansion, might be advantageous.

Diagrams Nos. 1 and 2 show by comparison the conditions of sunlight that will obtain at 12 o'clock noon, when an assumed artificial sky line is taken into consideration.

Notwithstanding the fact that a great number of hospitals in our cities today have restricted sunlight during the winter months owing to the reasons stated, hospital executives are at the present moment acquiring sites regardless of what the artificial sky lines are.

Even though hospital executives engage the services of an architect or engineer prior to purchasing the land, the painstaking studies required to develop graphically the shadows cast by adjacent buildings or artificial sky line are stupendous and frequently the resultant geometric diagram baffles even the designer. To the lay mind the final development is a conglomeration of lines only.

With this situation in mind the writer has for a long time advocated the study of city hospital planning with miniature scale models of the proposed hospital and the adjacent buildings, or artificial sky line. In the furtherance of this idea a wire frame or basket has been designed representing the celestial sphere which is used in conjunction with these models.

This wire frame or basket determines in a practical manner the angle of the sun's rays at any hour of the day for the summer and winter solstices and the equinoxes. The angle of sunlight is ascertained by placing the basket over the models, keeping the relative position of the compass the same on both.

The shadows are easily determined in a darkened room by the use of a small electric lamp and parabolic reflector representing the sun, the source of light being placed a sufficient distance away from the models so as to prevent distortion of the light rays.

It is surprising that this method of determining shadows is not more in favor with architects and engineers, as it is much simpler than the graphic method and easily comprehended by the layman. The relative position of the buildings can be studied and moved to suit requirements, courts can be enlarged or reduced in size and sunlight penetration in wards and rooms can receive careful consideration. Furthermore, the outline of the shadows at stated times of the day and month can be readily understood and compared.

From the foregoing it would seem that too

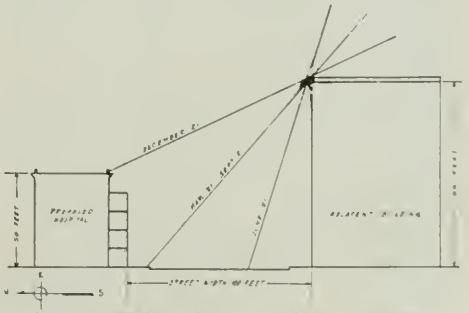


Diagram 2.

much stress cannot be placed on the artificial sky line phase of hospital planning, and it is with the hope that the caution herein advanced will be heeded by those contemplating the acquisition of property for this purpose that this article is written.

VENTILATING THE HOSPITAL KITCHEN, LAUNDRY AND LABORATORIES

By A. M. FELDMAN, M.E., Consulting Engineer, New York

THE ventilation of hospital kitchens, laundries and laboratories is a matter, not of supplying fresh air, but of removing steam, vapors and odorous fumes that arise from ranges, flat work ironers, steam kettles, washers, dryers.

For successful ventilation, hoods should be arranged over the above mentioned sources at a height not much above the head and extending about two feet beyond these sources on all sides. Over laundry flat work ironers it is best to attach to the hoods hinged metal aprons with glass inserts, suspended close to the frame and rolls of the flat work ironers, so that no steam may escape into the room.

The hoods should be connected with a system of duct work and exhaust fans. (Figs. 1 and 2.) The sizes of ducts and individual connections should be proportioned that there is no short-circuiting to prevent the hood or portion thereof nearest the fan from pulling more air than those farther away. If the hood is a long one, the duct should extend over the top the full length of the hood, with distributed sliding and adjustable dampers. (Fig. 3.)

In laboratories where there are several enclosed compartments not adjacent to each other in which chemical reactions are taking place, it is the writer's practice to install small exhaust fans for each compartment or hood, rather than one large fan for all. It is more economical in power; for since not all compartments or hoods are used simultaneously, there is no advantage in pulling air from hoods not in use. Besides the factor of economy there is an added element of safety; under this system the whole laboratory is not dependent on a single fan and motor.

It is advisable to provide additional exhaust registers in ceilings of

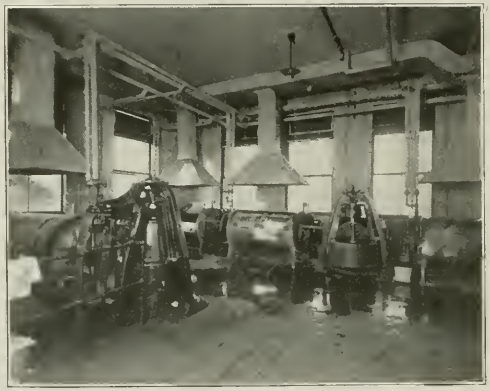


Fig. 1 Hoods and ducts over washers in the laundry of the Montefiore Hospital for Chronic Invalids, New York

Fig. 2. Hoods over dryers and ironers in the laundry of the Montefiore Hospital for Chronic Invalids

Fig. 3. Full-length hood and duct with distributed sliding and adjustable dampers, such as is used in kitchens of the same institution

kitchens, laundries and laboratories for steam, vapors and fumes that escape outside of the hoods.

For the proper operation of the exhaust system there should always be provided an intake of outdoor air. It is sufficient to rely on incoming air from corridors and other rooms provided there are open doors between them and the kitchen or laboratory; otherwise a window should be kept open.

It may be added that in cooking potatoes with steam and without water, one to two pounds pressure is sufficient. The writer has had occasion to observe that in some kitchens the same pressure of steam, about 35 pounds, was used as in the jacketed kettles. The result was that a great amount of steam was wasted, and the exhaust ventilating system would not handle the excess of steam.

CONSTRUCTION OUTLOOK FOR 1922

By HORACE H. HERR, Editor, The American Contractor, Chicago

As 1922 breaks on an uncertain world, conditions are more favorable to construction activities than they have been since 1914. Some very extravagant prophecies are being made on prospective building operations. If only building material prices and labor costs are considered, these forecasts are not unreasonable, but, unfortunately, there are several other factors which cannot prudently be ignored.

If hospitals have the necessary funds available to carry out their building programs, Mr. Herr, editor of The American Contractor, thinks they will encounter no unusual hazards if they put their projects under way at once. Immediate action, he believes, will allow the completion of such projects before competition for labor and materials tends to force up the ultimate cost of construction. During the last half of the year Mr. Herr looks for an appreciable advance in construction costs. The general material index may be expected to remain as it is now for the next few months. Hospital construction has been subnormal and this accumulated demand will augment normal requirements of 1922.

No basic industry can approximate maximum prosperity in the face of a general business depression. It may be more active than other industries because of conditions peculiar to it, but the modern industrial organization is too complex and interdependent to permit one industry working in high while others are working in low gear. It is well, therefore, to have in mind the fact that however promising the outlook may now be for building and construction work, these activities are bound to reflect in some measure the general average of conditions in all business. In the agricultural states, for example, while the potential demand for building is exceptionally great, the demand cannot exert its full force until there is material improvement in prices for farm products and a substantial liquidation of rural credits which froze when the price thermometer began to register lower and still lower values for farm products.

There is convincing evidence that the building record for 1922 will surpass the record of 1921. Perhaps the chief justification of this expectation rests in the steady increase in building activities since July, 1921. The statistics on construction contracts awarded show that the monthly totals from January to June, inclusive, in 1920, were higher than in the corresponding months of last year. The July total for 1921 was greater than the July total in 1920, and the monthly totals for August, September, October, November and December, 1921, were uniformly higher than for the corresponding months in 1920. When building activities continue increasingly active for six months with price and labor conditions constantly improving, the obvious conclusion is that the industry is approaching a season of abnormal activity, and this conclusion is the more substantial when investigation discloses an insistent demand of a magnitude capable of utilizing the maximum productive capacity of the building industry.

Analysis of statistics on contracts awarded, as compiled by the F. W. Dodge Company, in the territory east of the Missouri and north of the Ohio rivers, shows that the amount of work that goes ahead in a given year is approximately two-thirds of the total of contemplated projects reported in the previous year. On that basis and in the territory mentioned, the money valuation of the building program in 1922 should be slightly more than three billion dollars. The total for the contemplated projects reported in 1921 was $4,747,723,380, the figures for the final week in December yet to be added to the total. This is practically the total for contemplated work reported in 1920 from which came building activities in 1921 totaling approximately two and one-half billion dollars.

Having in mind the fact that these statistics are from the northeast quarter of the United States, in which population and industrial activities are congested, it is a very conservative estimate to place the money valuation for the 1922 building program in the remainder of the country at one billion dollars. This gives us a four billion dollar prospect in the building field for 1922.

To this vast sum must be added the millions which will go into highway construction, and it is estimated by competent authorities that from four to six billion dollars must ultimately be spent on our rail transportation systems.

This is the potential demand of varying insistence. There is no likelihood of the demand becoming 100 per cent active in 1922. Indeed, such a development would be of questionable benefit, for such a volume of construction would create demands for materials so insistent that spectacular price advances could not be avoided and, judging from past history, prices would advance again to such high levels that ultimately the buyer's strike would be revived, with a subsequent period of stagnation and embarrassing deflations.

That the building program in 1922 will approximate a total of three billion dollars is not an unreasonable expectation. With the exception of New York City and St. Louis, Mo., labor rates have been substantially reduced from the levels of a year ago. Everywhere labor efficiency has improved and the lower wages and improved efficiency have reduced the labor cost at least thirty per cent from the level of a year ago.

The following tabulation of indices on material prices gives rather a clear picture of current price conditions. This is the latest information published by the Division of Building and Housing of the Department of Commerce and it is worth while to observe that the index for all building materials advancing in October and November, shows only a slight reduction in December. By comparing the December index with the peak price index, one may form his own idea about the liquidation of prices:

INDEX NUMBER

Commodity	Peak Date	Peak Index	Oct. 1921 Index	Nov. 1921 Index	Dec. 1921 Index
Building materials	Mar., '20	310.0	165.3	169.5	163.2
C. brick, kiln, Chicago	Oct., '20	251.1	173.6	174.8	180.8
Gravel, New York	June, '20	340.0	226.9	226.9	198.6
Hollow tile, Chicago	June, '20	236.9	144.7	128.3	108.0
Lime, common lump, average, U. S.	Oct., '20	285.8	213.1	212.3	211.3
Portland cement, plant	Sept., '20	192.9	148.4	148.4	148.4
Sand, New York	May, '20	302.5	252.1	252.1	201.7
Reinforcing bars, Pittsburgh	July, '17	327.1	119.9	119.9	109.0
Wire nails, Pittsburgh	Jan., '20	252.9	164.9	161.6	153.3
Structural steel, Pittsburgh	June, '17	331.0	115.9	109.2	99.3
Douglas fir, No. 1, mills	Jan., '20	407.3	114.0	124.9	124.9
Hemlock, New York	Feb., '20	235.3	153.8	153.8	153.8
Spruce lath, New York	Jan., '20	396.8	230.5	207.2	207.2
Red cedar shingles, mills	Feb., '20	346.8	168.8	145.9	148.5
White oak, New York	Mar., '20	379.6	198.0	214.6	224.5
Yellow pine flooring, mills	Feb., '20	455.3	184.8	205.8	189.1
Plate glass, New York	Aug., '20	329.5	253.5	169.0	169.0
Window glass, New York	Aug., '18	295.2	231.0	231.0	231.0
Linseed oil, New York	Aug., '19	480.4	147.2	145.0	145.0
Putty, New York	Jan., '20	226.4	179.2	179.2	179.2
Turpentine, New York	Apr., '20	601.8	176.4	189.3	190.2
White lead, New York	Mar., '20	229.3	181.2	181.2	181.2

Competent authorities express the belief that prices will remain near the present general level for some time. Doubtless prices on those items which still are high may be reduced nearer the general level. These reductions probably will be offset by advances in items such as lumber and steel, so that the general building material index may be expected to remain about as it now is for the next few months. With the opening of the spring season the demand is very apt to strengthen prices and it will not be surprising if there is an appreciable advance in construction costs during the last half of 1922. Substantial freight reductions such are are now advocated by the National Federation of Construction Industries would tend to hold down construction costs, but several very careful students of the price situation have not hesitated to predict higher prices for the latter half of this year.

If the financial situation were easier, one would be justified in saying, without reservation, that current conditions are more favorable to building projects than will be the conditions prevailing six months from now, when the market is more active. The cost of financing, however, still is high. In many localities it is too high to warrant investment and industrial building. It is assumed, however, that the hospital or institutional building project has accumulated its building fund before coming to a decision to build. In such instances where the necessary funds are available, no unusual hazards will be encountered if the project is put under way at once. Immediate action will enable the builders to make the most of a labor market which permits of discrimination in the labor hired; it will take advantage of an abundance of all materials and the project is likely to be finished before competition for labor and materials tends to force up the ultimate cost of construction.

Turning from the general construction field to the division of hospitals and institutions, there is evidence that this type of building has been subnormal, especially in the New England States, the South and the far West. The F. W. Dodge Company statistics show the following for building contracts actually awarded during the years indicated:

For Hospitals and Sanatoriums

District	1919 No.	1919 Cost	1920 No.	1920 Cost	1921 No.	1921 Cost
Boston	73	$ 3,093,442	45	$ 3,310,300	57	$ 6,819,200
New York	99	11,819,605	122	9,811,700	92	7,785,800
Philadelphia	77	3,908,800	60	4,597,400	81	7,581,500
Pittsburgh	27	816,100	56	7,693,800	70	8,358,700
Chicago	132	9,929,035	121	14,968,100	111	14,985,800
Minneapolis	23	2,442,800	25	1,417,100	18	3,470,000
Total	431	$32,009,782	429	$41,798,400	429	$49,001,000

For Homes and Institutions

District	1919 No.	1919 Cost	1920 No.	1920 Cost	1921 No.	1921 Cost
Boston	17	$ 569,400	20	$1,014,100	20	$ 885,700
New York	36	1,549,546	40	2,982,400	36	5,655,500
Philadelphia	22	544,500	34	1,197,700	41	1,295,500
Pittsburgh	24	2,522,800	21	1,335,500	32	1,758,900
Chicago	45	1,779,595	33	1,691,000	43	4,935,800
Minneapolis	7	216,000	11	523,700	6	219,000
Total	151	$7,181,841	159	$8,774,400	178	$14,750,400

Projects reported as contemplated during 1921 (figures for December not included) show the following:

Contemplated Projects in 1921

District	Hospitals and Sanatoriums No.	Hospitals and Sanatoriums Cost	Homes and Institutions No.	Homes and Institutions Cost
Boston	93	$ 9,283,300	42	$ 2,179,800
New York	173	7,336,800	59	3,426,300
Philadelphia	149	13,897,000	70	4,308,800
Pittsburgh	97	9,426,200	42	2,450,900
Chicago	220	32,208,600	93	9,693,000
Minneapolis	41	3,657,500	18	790,000
Total	773	$75,809,400	324	$22,848,800

In studying these figures it is well to have in mind that they are for the territory north of the Ohio and east of the Missouri rivers and that the cities named include much adjacent territory rather than the city proper.

During the past three years (January 1, 1919, to December 1, 1921) the amount of contemplated work reported in the hospital and institution group for the entire Dodge territory has been $288,000,000. The normal amount of work actually constructed in the same period, approximately two-thirds of the total contemplated work, should have been $192,000,000, whereas the actual construction has amounted to $153,328,000. Although this class of construction has shown an increase in 1921, these figures seem to indicate that there is still work of this class held up which may be expected to go ahead in the future. This is accumulated demand and will, of course, augment the current or normal requirements of the year.

GRACE HOSPITAL REDUCES RATES

A reduction of twenty-five per cent in rates of the x-ray laboratory and surgical department was made by the Grace Hospital of Detroit on February 1. On the recommendation of the superintendent, the board ordered these reductions of rates which were raised during the war and post-war periods in order to meet current expenses.

CARE OF EPILEPTICS AT CRAIG COLONY

While general rules may be laid down in regard to the care of epileptics as well as of others suffering with nervous disorders, it is especially important that this particular class of patients should have its treatment based upon the most careful analysis, say the managers and officers of Craig Colony at Sonyea, N. Y., in their latest annual report to the legislature of that state. The arousing and sustaining of the patient's interest and the affording of proper energy outlets should be essentials in prescribing treatment, the report brings out, it being remembered that the epileptic does not differ materially from other persons.

In the last analysis, says the Craig Colony board, one must admit that the essential feature in the treatment of epilepsy is a thorough understanding on the part of the patient of what obstacles he must overcome and in what way he lacks power to meet many of the situations occurring from day to day. The individual patient must be possessed of sufficiently normal mentality to permit of participation in free discussions as often as may be needed in regard to his treatment, both physical and mental. As it may be necessary to attempt a complete rearrangement of the habits and mode of life of the patient, it is easily understood how difficult a satisfactory solution of his problem may be. The goal sought should be to arouse healthy interests in the patient and thus effect a new viewpoint of life and a healthier way of meeting its problems. The majority of epileptics must pursue a mode of life which makes less insistent demands upon them than are made upon healthy individuals.

An occupation in which the patient is interested and which permits of a sufficient amount of physical and mental exercise will prove beneficial, the report continues. Unfortunately, it reads, many are averse to attempting such a course either because of their faulty mental habits, or oftentimes because of improper advice from relatives and friends. The following of an occupation in which the patient is interested, with allowance for recreation, regard for simple hygienic rules and reasonable diet, will go a long way toward benefiting the patient who at first may present a most discouraging prognosis.

NAME IS MISSPELLED

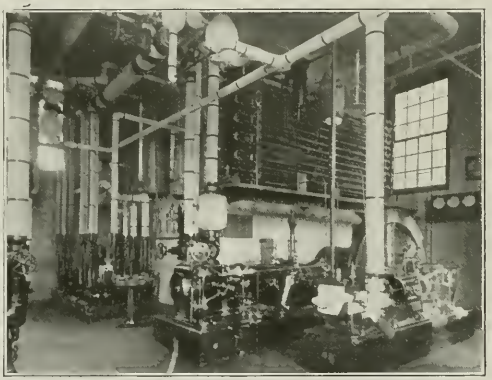
Through an error which THE MODERN HOSPITAL deplores, the name of Dr. Frank P. Corrigan, appearing in the article on "The Hospital Situation in South America," in the January issue, was incorrectly spelled.

MECHANICAL REFRIGERATION AND ITS USE IN THE HOSPITAL

By JOHN DUTCHER, Mechanical Engineer, of Richard E. Schmidt, Garden & Martin, Architects, Chicago

REFRIGERATION, the extraction of heat from any substance, is accomplished by the simplest natural laws. It takes five times as much heat to vaporize water as it does to bring it to the boiling point. The simplest refrigerating machines are the porous jars with thin walls used to keep water cool. In these the water oozes through the pores and evaporates on reaching the outer surface. The amount evaporated is comparatively small, but the amount of heat required is large; it is extracted from the water remaining in the jar.

Refrigeration on a larger scale follows the same natural law or principle that the expansion of liquid into vapor is accompanied by the absorption of heat from surrounding objects. The unit or measure of refrigeration is called the ton. It is the heat required to melt one ton (2,000 pounds) of pure solid ice or the heat absorbed by 2,000 pounds of pure ice melting into water at 32 degrees F. and is generally calculated on a twenty-four hour basis.



20-Ton Refrigerating Machine at the Illinois Central Hospital, Chicago

The expansion from a liquid into a gas is accomplished by raising the temperature of that liquid above the boiling point. In order to freeze ice it is necessary to use a liquid that has a boiling point below 32 degrees F.; anhydrous ammonia or carbonic acid gas (CO_2) are most generally used.

Mechanical refrigerating on any scale depends upon the expansion of a liquid into a gas, accompanied by the absorption of heat from the surrounding objects. The gas is expanded into pipe coils called expansion or cooling coils. The compressor sucks the expanded gas from these coils and compresses it under considerable pressure. The gas leaves the compressor quite warm and is discharged into a condenser, where the pipes containing the hot gas are submerged or brought into contact with cool water. The pressure of the gas builds up and is cooled by the water until the gas liquefies. From the condenser the liquid is collected into a receiver and is conveyed to the expansion or cooling coils, where it is again expanded into a gas. The same charge of gas is used over and over. Its replacement is caused by small leakages at valve stuffing boxes and at the packing on piston rod and gaskets.

The water flowing over the condenser is a very important link in the process. As it leaves the condenser the water is 10 or 15 degrees warmer than when it entered. From this it can be seen that the heat taken up by the water closely represents the amount of cooling done by the expansion coils. In case the cost of water is low, it can be wasted to the sewer, but where water is scarce or expensive it will be found advisable to run the water leaving the condenser in a cooling tower or spray pond. Fig. 1 represents a refrigerating plant diagramatically, the refrigerant gas forming one complete cycle. The cooling water on the condenser and the spray pond forms a complete cycle of heat absorption at the condenser, and heat dissipation by evaporation at the spray pond is similar to the evaporation on the surface of the porous earthen jar.

The machines most commonly used in mechanical refrigeration in the hospital work on what is generally termed the compression system. This consists of a gas compressor or pump driven by steam engine or motor. Choice between motor or engine depends largely upon local conditions. As a general thing, a steam engine is used in units of considerable size, especially where use can be made of the exhaust steam for the heating system or for heating water for domestic purposes. The steam driven unit will prove the most economical in the majority of hospitals. Where the cost of current is low, the electrically driven compressor can be used. There has been considerable development in refrigerating machines automatically controlled. Such improvements have proved quite satisfactory in the case of elec-

trically driven units. The motor is stopped and started by special thermostats regulated by the temperature in the boxes to be cooled. Special control valves to turn on or off the condensor water are available to work in conjunction with the automatic control machine. Also it is possible to use temperature control valves on the outlet from the condenser that will regulate the flow of water and allow any water of a certain predetermined temperature to escape. This feature takes from the engineer the necessity of regulating by hand the amount of water used and results in considerable saving.

On an installation which contains several boxes distributed in various portions of the building, the automatic control refrigerating system is practically eliminated for the reason that it can control temperature in one box only.

Anhydrous ammonia and carbonic anhydride, generally known as carbonic gas (CO_2), are the refrigerating mediums most commonly used. The ammonia machines operate under considerable less pressure than the CO_2 compressor, and they have been in general use for a good many years. They are built in many styles, single acting, double acting, vertical or horizontal. Carbonic gas machines have to withstand considerably greater pressure and the gauges for these machines are generally calibrated in atmospheres rather than pounds. This high pressure makes it necessary for the manufacturer to design special stuffing boxes to withstand this pressure and to provide special lubrication for these stuffing boxes.

The stuffing box is one of the critical considerations in selecting carbonic gas machines. The efficiency of the gas compressor depends largely upon very small clearances at the end of the cylinder and the suction and discharge valve openings; in selecting a compressor the amount of clearance should be looked into carefully. Of the two gases above mentioned, the carbonic acid gas is the odorless one, and where it is necessary to install refrigerating machines in the basement of the hospital building, this type of machine should preferably be used. In hospitals that have detached power houses, an ammonia compressor can be installed in perfect safety and is perhaps the cheaper of the two.

Suggestions on Brine Coolers

The brine cooler preferably should be located close to the machine, so that there will be short pipe connections between the compressor, condenser liquid receiver and expansion coils. In the average sized hospital, where only a small amount of ice is required per day, the brine cooler can be combined with an ice freezing tank, similar to the one shown in Fig. 2. The cooling of the brine in this tank is accomplished by evaporating ammonia or carbonic acid gas in the pipes. The size of the ice cans should preferably be small, not over 100 pounds, which would be approximately 8″x16″x32″. Expansion coils in a tank of this sort should be of the continuous welded type, having as few joints as possible and being distributed uniformly over the entire area of the tank, by this method eliminating the necessity of special brine circulating pumps or agitators. It would be more economical to add a few extra cans in the tank and allow a longer period for freezing rather than to install a brine agitator which would require power to operate it. One end or side of the brine tank should have a partition arranged to maintain a constant level of the brine around the ice cans. Calcium chloride brine should preferably be used, and maintained at specific gravity of 1,250 Baumé.

Refrigerator Coils Cooled Best by Brine

Coils for cooling the refrigerator boxes can be cooled by either direct expansion or by brine from the brine cooler. In hospital work it is preferable for many reasons to use the brine system for cooling. This is accomplished by connecting the suction of a small pump to the brine tank and circulating brine from the discharge of the pump through the brine supply line to the various refrigerating coils. The return brine lines following the supply lines bring the warm brine back to the brine cooler to be re-cooled. By installing shutoff valves on each refrigerator box, the amount of brine flowing through the coil into the box can be regulated and the temperature of the individual boxes controlled accordingly. Care should be taken, however, to have large valves which will not stop up. The valves should clear themselves by opening wide to allow the required amount of brine to pass, and reclosing. Valves for each refrigerator should preferably be locked in a separate compartment, so that only one man can be held responsible for the regulation of the temperature in the boxes; this man should keep a daily report of the temperature in each refrigerator throughout the hospital.

In close proximity to the brine cooling and ice freezing tank, an ice storage room should be provided large enough to contain several days' supply of ice. One hundred pound cans of ice can be lifted with a small hand-operated ice hoist and truck and taken to the ice thawing apparatus; this apparatus should consist of a tilting galvanized iron container, large enough to hold one ice can, mounted on a steel pan so that hot water can be discharged over the can to loosen the cake of ice. Special care should be taken that this thawing dump be properly drained so as to allow

none of the water to splash into the brine tank and dilute the brine.

Drinking Water Coolers

To cool water for drinking purposes, special coolers should be located close to the brine tank. Coils for circulating brine in the drinking water cooler can be connected to the brine circulating system and controlled by valves similar to those described for each refrigerator. These brine coils should be divided into three sections, so that the engineer can control the temperature of the water to any desired degree by turning on or off some of the brine cooling surface. The drinking water cooler should be designed both to cool the water from the temperature of the make-up water and to recool the recirculating water from the system. The drinking water system proper should be circulated by a small pump which would discharge the water through the lines to the various drinking fountains. The return circulation from this line should follow the discharge line from the building and return the circulating water to the cooler for recooling. It is generally advisable to install in the highest point of the

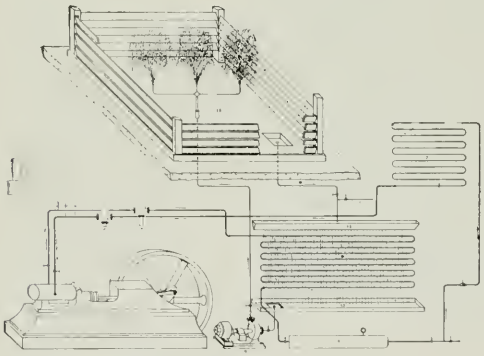


Fig. 1. DIAGRAMATIC REFRIGERATION PLANT.

1. Compressor.
2. Discharge pipe.
3. Oil trap.
4. Condenser.
5. Liquid receiver.
6. Expansion valve.
7. Cooling coils.
8. Scale trap.
9. Suction pipe.
10. Gauges.
11. Water supply.
12. Trough.
13. Pan.
14. Circulating pump.
15. Spray pond.

The cycle of refrigerant can be followed as well as the course of the condensing water.

building an air eliminating tank to which the top of all drinking water risers are connected. The connection to each individual drinking fountain should be taken off of the riser at a point two feet higher than the outlet of the fountain. This branch connection must be carried down adjacent to the riser and be provided with a control valve to regulate the amount of water at each individual fountain. By making this connection as described, it is possible to eliminate the very annoying discharge of air through the fountain. Persons at the drinking fountain not infrequently have water and air spattered up into their faces because air has entered the fountain with the water. By thus eliminating the air and providing a uniform flow of cool water to the fountains a considerable saving in refrigeration can be made.

Advantages Over Ice Refrigeration

The advantages of mechanical refrigeration over cooling by ice are a marked improvement in keeping the boxes clean and in a sanitary condition. The temperature of the various boxes can be varied to meet any requirements, there is no messing of the floors due to drippings from the ice, and the boxes are a great deal dryer.

When used in the main kitchen, several boxes are installed, in order to preserve the food better, such as one for meats, one for vegetables, one for milk and dairy products, and one for fish. Smaller refrigerators are used in the serving rooms for prepared food and in the laboratories for preserving and freezing specimens for sectional work.

Ice is made by this machinery for table use, ice packs, ice cream freezing, and cooling drinking water. Mechanical refrigeration is also employed for cooling morgue body cases and in special rooms for storing garbage until it can be properly disposed of.

The following figures indicate the pounds of ice used per day during summer and winter in several Chicago hospitals; and also the quantity used per patient per day. These hospitals have mechanical refrigerating machinery and the quantities set forth represent the amount of ice made and used for ice packs, table and other purposes:

Hospital	*Winter*	*Summer*	*Beds*
Illinois Central.....	300 lbs.	500 lbs.	115
Chicago Lying-In	750 lbs.	1,000 lbs.	128
Alexian Brothers.....	230 lbs.	420 lbs.	363
Grant, daily average for year, 1,000 lbs.			150

ICE PER PATIENT PER DAY

	Winter	*Summer*
Illinois Central	2.6	4.35
Chicago Lying-In	5.85	7.8
Alexian Brothers	.6	1.1
Grant, daily average for year, 6.67.		

In choosing between an ammonia or CO_2 machine there is but little difference where cool condenser water is available. When the condenser water goes over 70 degrees F. the ammonia machine should be given the preference. In comparing the two machines with the boiling of the refrigerant at 10 degrees F., the increased horsepower required per ton of refrigeration by increasing the condenser water from 70 degrees F. to 80 degrees F. would, with the ammonia machine, amount to two, while in the case of the CO_2 machine the increase would be three.

Where direct expansion is used over a large area requiring a number of coils, ammonia has the advantage over the CO_2. The cost of replacement of gas is likely to be smaller for the ammonia machine, because it is hard to detect leakage in the CO_2 system. Advantages in favor of the CO_2 system are that the gas is odorless, noncorrosive (which allows the use of copper condenser coils), and non-explosive.

Cork Is Best Insulation Material

Insulation is a material, or arrangement of material, that is a non-conductor of heat. It is one of the most important items to be considered in mechanical refrigeration. Without it the cold brine lines leading to the various boxes could not be protected, or without insulation in the boxes themselves there would be no common refrigerating box. No one would think of running electric wires without a good rubber covering on them; special rules and laws require a fair degree of protection. In the case of refrigerating, however, the insulation on the system is not restricted to any rule or law, and it is up to the engineer to design a system that is economical. It is possible to have a refrigerating system that is practically all wasted, due to poor insulation; the results would be more expensive and less efficient than could be accomplished by using ice.

Cork is the best insulation on the market; it is not affected by moisture. For such uses the natural cork is broken up into fairly small pieces and is known as granulated cork. Granulated cork can be moulded into metal moulds of any desired shape; by applying pressure and heat the natural gum and resin contained in the cork binds the particles into what is known as cork board, and in this shape it is the best form of insulation on the market. The binding together of granulated cork by the use of some foreign material does not give results to compare with the work of its own gums and resins. In building up a large refrigerator or in installing a large brine tank or cold storage room, two or more layers of cork board are generally applied. Layers should also be applied in such a way that all joints are broken; best results are obtained by using hot asphalt in the application of the cork boards. In some cases Portland cement is used in place of asphalt to cement the layers together, but it is doubtful if the results are equal to the hot asphalt process.

Covering the Pipes

The insulation of the brine tank under temperatures generally used should consist of five inches of pure cork board, consisting of one three-inch layer and one two-inch layer laid in hot asphalt, with broken joints. This insulation should be protected from abrasion by being enclosed in tongue and grooved sheathing or tile furring and cement plaster.

All brine pipes and exposed suction lines to the refrigerating machines should be covered with standard thickness moulded cork, having a thickness corresponding with the following:

STANDARD CORK BRINE COVERING

Pipe Size (both in inches)	*Thickness*	*Pipe Side* (both in inches)	*Thickness*
⅜	1.78	2½	2.56
½	1.70	3	2.68
¾	1.85	3½	2.81
1	2.00	4	2.56
1¼	2.32	4½	3.06
1½	2.50	5	2.78
2	2.44	6	3.12

In applying the covering, all foreign material, such as plaster and plaster cement, should be removed from the surface of the pipes and from the inside of the covering before it is applied. All end joints should be staggered by cutting one-half of the first section of covering and leaving the other half full length. All longitudinal joints should be preferably on the top and bottom, not on the sides. Covering should be applied on all joints with special waterproof cement and should be held securely in place by copper-clad steel wire, using not less than six bands to a section of covering. Care should be taken to see that all the binding wires are drawn tightly. All space between the covering and the pipe and between each section of covering should be filled with a special

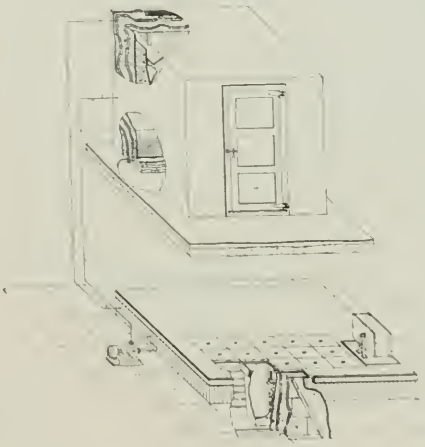


Fig. 2. DIAGRAM OF ICE TANK AND REFRIGERATOR.

1. Brine tank top.
2. Ice can.
3. Ice can top.
4. Expansion coils.
5. Steel tank.
6. Cork insulation.
7. Asphalt saturated felt.
8. Tank enclosure.
9. Ice dump.
10. Floor.
11. Brine suction.
12. Brine circulation pump.
13. Brine discharge.
14. Cooling coils.
15. Baffle.
16. Tile wall.
17. Tile floor.
18. Refrigerator door.
19. Return brine.

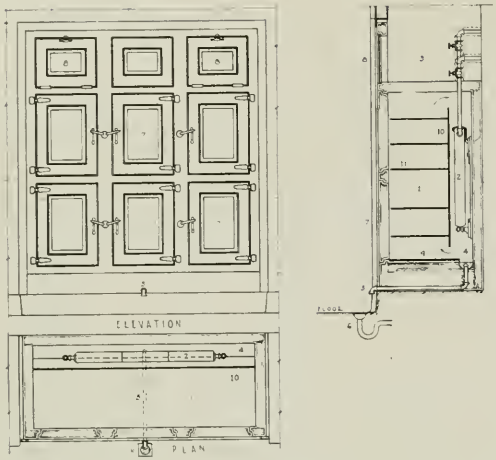


Fig. 3. SMALL REFRIGERATOR BOX.

1. Provision chamber.
2. Cooling sections.
3. Valve chamber.
4. Drip pan.
5. Drip pipe.
6. Refrigerator drain.
7. Refrigerator door.
8. Valve chamber door.
9. Tile floor.
10. Baffle.
11. Porcelain enamel shelves.

waterproof cement made for this purpose. Where brine lines pass through tunnels or pipe spaces and where the temperature is quite warm, it is advisable to protect these lines in such a way that the waterproof cement cannot drop out or flow at times when the lines are shut off, for heat softens the cement. This can be accomplished by wrapping all pipes with two heavy layers of resin finished paper, over which a canvas jacket is applied. The canvas jacket should be of at least six-ounce canvas, lapped and pasted, and in addition it should be banded with standard pipe bands spaced not farther than 18 inches apart. The covering of drinking water lines should be preferably cork of the same quality applied in the same manner as described for brine lines; in view of the lesser difference in temperature between the water in the pipes and the surrounding air in this case, it is frequently not done. The thickness of the covering should be as indicated in the following table:

ICE WATER PIPE COVERING

Pipe Size (both in inches)	*Thickness*	*Pipe Side* (both in inches)	*Thickness*
⅜	1.28	1½	1.42
½	1.20½	2	1.47
¾	1.35	2½	1.37
1	1.47	3	1.56
1¼	1.48	3½	1.62

There are on the market many makes and varieties of insulation; in any case, it can be safely said that they are a substitute for cork. Cork, as has been said, is not affected by moisture. In a great many cases built-up insulation, consisting of lumber, tar paper and air spaces, depending upon the air space being air tight for insulation, are used; other arrangements include the use of fibrous material of some sort, such as sawdust, mineral wool or flax with hemp wastes, in place of cork; but in every case, whenever these materials become damp, they lose their insulation qualities. In a refrigerating box where the temperature on the inside is cold and where there is an outside temperature of 70 or 75 degrees, the hot air contains a great deal more moisture than the cool air; moist air, then, in coming in contact with the cool surface of the refrigerator or the insulation, drops its moisture because the dew point is lowered, moistens the insulation, and the insulation becomes a conductor rather than an insulator.

Local Conditions Will Govern Design

Definite figures are liable to mislead in the designing of a refrigerating plant, and it is best not to try to explain the size and length of coils, the size of condenser, etc. They vary with every job, due to local conditions, and it can be said that refrigeration, although it follows simple natural laws, is dependent upon conditions that are variable with the season. A plant that is arranged to suit one community would be of little use in another. The amount of cooling accomplished in the condenser depends upon the surface and the temperature of the water going over it or in contact with it, and in a great many communities the water available for the condenser is considerably warmer in the summer time when the load is large than in the winter when the load is small. In the case of refrigerating boxes, the amount of coils largely depends upon the quality of the insulation in the boxes, and upon the amount of frost allowed to accumulate on the coils, which acts as an insulation and decreases their efficiency. This can cut down the efficiency of the coils approximately fifty per cent. The capacity of a refrigerating machine itself, which as a pump displaces a certain amount of gas or rather cubical contents per minute, is a varying quantity dependent upon the suction pressure under which the machine is operated. For instance, the same machine working under a low back pressure will do less refrigerating than the same machine working under high suction pressure; likewise, the power varies with the work done. In hospital refrigerating, the majority of the work done does not require low temperature and in special cases, such as the laboratory where special samples are to be frozen to a low temperature, it would be advisable to use a small booster machine that would operate on a low suction; this gives in turn a low temperature, discharging the refrigerant into the suction pipes of the general sys-

tem. From the above it can be seen that the varying temperature of water in condensers, varying efficiency in the cooling coils and the varying amount of refrigerating effect due to fluctuations in the suction pressure make for a varying condition in refrigeration. It is therefore an essential matter to design and so proportion an installation that it will coordinate with local conditions. The only real way of rating a plant is that it be equal to the melting capacity of so many tons of ice at 32 degrees.

Engineer Is Often at Fault

The engineer is in a great many cases not fully familiar with the operation of a refrigerating plant. He operates the plan by maintaining a certain pressure on the suction and a nearly constant pressure on the discharge, such as he thinks is best suited for his plant. The result is that in many cases the refrigerating apparatus is operating inefficiently. The chances are that the engineer will insist on having the suction line frost back very heavily in order to keep the machine cool; some engineers will insist that this is the only way to keep the stuffing box on the rods tight. The leakage around the stuffing box is in most cases caused by changes in temperature. If the engineer can understand really what is going on in the machine he is operating, it would be a great aid to him in running it efficiently. When he realizes that refrigeration depends upon two things, temperature and pressure, it will be easier for him to grasp what is essential.

There is no such thing as cold. Cold is simply the absence of heat, and when we say anything is cold, we are comparing it with some other normal temperature. Every substance contains some heat, if it is above the temperature of 460 degrees below zero F. Heat is indestructible and can only be converted into work or stored up in chemical form. Unless changed into work it will remain in a given substance until it flows into a substance at a lower temperature. This can be compared to the flow of water from a reservoir. The water will flow from the high to the low level, and the greater the height of the reservoir the more rapid will be the flow. It is the same with heat. When two materials of different temperature are in contact, the heat will flow from the one having the higher temperature to the one having the lower temperature. The temperature of the heat in a gas is increased by increasing the pressure, and it is upon this principle that refrigeration is based. Because we cannot destroy heat, we are able to figure out size and quantities in designing a refrigerating plant. In order to cool water or the interior of refrigerator boxes, we must have a substance of a lower temperature so that the heat will flow from the water or the refrigerator to the material having a lower temperature.

In other words, the whole process of refrigerating is based on the handling of heat, controlling of temperatures, and the fact that the pressures under working conditions are determined by the temperature. For this reason the control of refrigeration should be accomplished by the control of temperature and not of pressure.

The amount of heat that a pound of ammonia can absorb depends upon the temperature at which the evaporation takes place and the temperature of the liquid ammonia introduced into the expansion coil. For instance, if the evaporation takes place at zero degree F. and the temperature of the liquid entering the evaporating coil is 90 degrees F., the amount of heat which one pound of ammonia will absorb by expanding from liquid at 90 degrees F. to a gas at zero degrees F. is 469 B. T. U.; the work done by the compressor depends upon the number of pounds of ammonia handled, for the higher the pressure in the expanding coils and the lower the temperature of gas handled, the more pounds of ammonia will go through the cycle, and the more pounds of ammonia handled by the machine per minute, the more work is being done. The temperature of ammonia leaving the condenser should correspond to the saturated pressure, and where condensing surfaces are well proportioned should not exceed by more than 10 degrees the temperature of the water leaving the condenser. The difference of temperature of gas leaving the evaporating coils and that entering the compressor should not be more than a few degrees. The temperature of the gas leaving the compressor should be close to what is required for compression; if it is exceptionally high, the high temperature is prob-

Situated on Kern Mesa, 150 feet above the river, with a pleasant valley in front and snow-capped mountains in the rear, is the new Kern Hospital Group at Bakersfield, Cal., now in process of construction. The new hospital will consist of a two-story central building with a service building behind, men's ward building to the west and women's building to the east. A central heating plant, nurses' home, detention home for fifty boys and girls, and an old people's home for sixty, are included in the present layout. The structures will be of brick and terra cotta with tile roofs. Charles H. Biggar of Bakersfield, is the architect and Dr. R. G. Brodrick, of Oakland, consultant.

ably caused by leaky piston rings or a wire drawing through valves that are too small.

In the case of ammonia machines, if operating under a suction pressure of 15 pounds, a pound of liquid ammonia, when expanded into gas, occupies approximately nine cubic feet; if this nine cubic feet of ammonia is expanded on its way to the compressor so that it occupies twelve cubic feet, the compressor will be obliged to run one-third faster or be made one-third larger in order to handle one pound of ammonia at the same rate. Great care should be taken that the ammonia entering the suction of the refrigerating machine should not contain an excessive amount of unexpanded liquid. The liquid or unexpanded ammonia when entering the hot cylinders expands rapidly and by the time it is compressed is expanded into gas. This ammonia has not done useful work, and has reduced the efficiency and output of the machine materially. A machine working under this condition is operating on what is commonly termed "wet compression," and in many cases small plants are operated under a condition in which so much unexpanded ammonia is entering the compressor that the output is reduced to practically nothing. According to recent tables of a test made by the York Manufacturing Company, a machine working under a suction pressure of fifteen pounds, and discharging against a condenser pressure of 185 pounds, increased its output from twelve and one-half tons to twenty-sx tons when the discharge temperature was increased from ninety-five degrees to 243 degrees. The engineer should know the essential elements on which refrigeration is based, and if he keeps them in mind he will be able to operate the plant efficiently and give real results.

Those not conversant with refrigerating matters like to see ice on the coils in refrigerators and apparently think that it helps refrigeration. This view, however, is incorrect. Ice and frost insulate the coils, reduce their efficiency and, if the ice is allowed to form heavily, sometimes cracks pipes or fittings. Frost and ice on coils are produced when the doors are left open and brine is circulating through the coils.

The doors should always be kept closed, but if ice is formed on the coils the brine should be shut off, the contents of the refrigerator removed, the doors opened and left open until the room temperature has melted the ice and frost.

We have in the Adirondack mountains of New York, and various sections of the western part of the United States, famous health centers for the cure of lung and throat trouble. The dry air, or low relative humidity, aids the sufferer. The dry regions are generally surrounded by mountains of considerable altitude. It is on these mountains that the moisture laden air from the lower levels is cooled and drops its moisture, allowing only the dry air to reach the valleys beyond. This cool, dry air is warmed and expanded by the heat of the sun and is nature's best climate for certain ailments.

Manufactured weather is a reality today, made possible by mechanical refrigeration. Washed air is cooled by cooling coils until it drops its moisture. The cool, dry air is then reheated by steam coils and we have perfect air the year around. The doctor can prescribe any degree of humidity best suited for his patient. This manufactured weather will be constant and will eliminate the moist air during rain, dust or sand storms that occur at intervals in the best climates. Manufactured weather is being used quite extensively in factories where constant weather is required to turn out a uniform product, and as a by-product it has increased the output by increasing the comfort of the workers. Where power is cheap or ample funds available we may look for special hospitals to have special air conditioned weather throughout the year.

INTERNATIONALIZING SERA STANDARDS

Cooperation of the foremost laboratories of the world, including those of United States, for the unification of international standards of anti-toxic sera has been begun on a large scale by the League of Nations Health Committee, according to detailed plans received here today. Already two preparatory conferences have been held, the work divided among the various national laboratories, and the individual studies begun.

The work involved is considered of great importance to the medical world. Up to now there has been as much confusion in the various national standards of measuring the strength of anti-toxic sera for diseases such as dysentery, tetanus, diphtheria, syphilis, meningococcus and pneumococcus as there has been in the different currency systems in the world.

This has had two serious effects. First, the American scientist, for instance, is handicapped in studying methods of treatment of various vital diseases abroad because of the different standards of measuring the strength of the anti-toxic sera employed; secondly, as international trade in sera is increasing, it represents not only an inconvenience, but a positive danger to have their strengths listed at varying standards.

Other bodies besides the U. S. Public Health Service which will cooperate in the work are the Medical Research Council of Great Britain, Pasteur Institute of France, State Institute of Italy, State Institute of Warsaw, Hygienic Institute of Basle, Pasteur Institute of Brussels, Kitasato Institute of Japan, as well as Austrian and German organizations.

ANESTHETISTS PLAN WORLD CONFERENCE

The World Congress of Anesthetists is to be held in Columbus, Ohio, on the tentative dates of October 31 and November 1, it is announced. Invitations are being forwarded by the National Anesthesia Research Society to anesthetists in many foreign countries and a large attendance is expected from the United States and Canada.

PAINTS AND VARNISHES IN THE HOSPITAL

By C. E. O'HARA, Chicago

FROM the standpoint of sanitation the pigment and vehicle which constitute the paint or enamel product determine the resistance of the paint film toward harboring bacteria in quarters now or previously occupied by persons suffering from contagious disease. The pigment and vehicle also determine the extent of the absorption of dirt into the paint or enamel film and its receptiveness and retention of dust.

The serviceability of the finished surface on walls, ceilings, floors and fixtures in hospitals is very important. The finished surface, of course, must be one that can be frequently washed, as it is necessary to maintain sanitary conditions throughout the buildings.

Careful selection of color for walls and ceilings from operating room to kitchen should be made. Proper choice of color insures maximum efficiency of the physician, surgeon, nurse, housekeeper and chef, owing to its light reflective factors. Color, too, has a definite relation to the patient's mood. Light tints in proper harmony are restful; restfulness is conducive to happiness and amiability, and they, of course, stimulate convalescence.

The architect who is selected to prepare the plans and specifications of the hospital is obviously the one who should first be consulted relative to interior finishes. He, in turn, should consult with competent master painters before specifying the material to be used, the colors to be selected and the procedure of application. In this brief article we shall endeavor to present helpful suggestions relative to the finishes for hospitals and the care of wall surfaces.

Alameda County Hospital at San Leandro, Cal., has just opened a new Employes' Building, erected at a cost of $78,000. Each employe has a separate room in the wings, and in the center are provided a library, writing room, billiard and recreation rooms.

In the majority of the present day operating rooms the finish is of encaustic tiling. This fact, we believe, is responsible for the specifying of the glazed white finish in operating rooms of all old hospitals, when refinishing is in order, and in new hospitals not equipped with tile operating rooms.

The only objection to the glazed white finish of the operating room is based on the complaint of surgeons who claim that this finish develops nerve fatigue caused by the over-strain of the accommodative and visual capacities of the eye in trying to keep out the light rays from every direction. This objection to tile or even an enamel of high gloss finish can be eliminated to a great extent by the use of ground glass windows, or by the use of a semi-gloss or flat white enamel. That this subject of high gloss is well worthy of far more consideration than it has received in the past has been emphasized by Dr. Harry M. Sherman, of the San Francisco Polyclinic, who in an article written for the *California State Journal of Medicine*, sets forth his actual experience in an operating room in which the lower walls and floor were finished with a spinach green enamel to prevent the bright daylight from being reflected upward into the eyes. This, however, is an advanced idea, and we do not believe acceptable to the average hospital without modification.

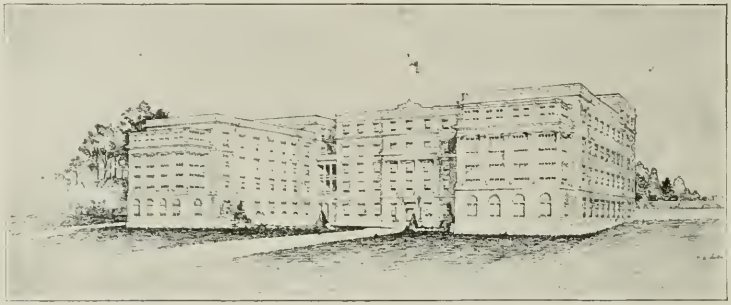
The operating room should be finished with an enamel. Enamel may be had in gloss white, semi-gloss white, semi-flat white, flat white and tints.

The high gloss enamel is less receptive to dust retention than are the other whites. The reflective factor of flat enamel is greater than that of gloss by five to ten per cent. Light reflected by gloss white is about seventy-five per cent, as against eighty per cent by semi-flat or flat white A ceiling finished with a cream enamel has a reflective factor of about seventy-three per cent; ivory has about seventy per cent and yellow about sixty-eight per cent.

Enamels, either flat or gloss, have about the same resistance to frequent washings and to the harboring of bacteria; manufacturers of Ripolin enamel guarantee their product to be bacteria-proof.

An architect or master painter can specify the proper preparation of the surface, the necessary sealing coats, the undercoats and the finishing coat for a perfect enamel finish to meet any requirement and condition.

The decorator who knows his business considers the height and dimensions of the rooms and wards, the exposure, the amount of light and the furniture in the room in the selection of colors. Certain colors should never be used in hospitals, as they eat up light and make the room appear dark and depressing. The principal offenders in this class are browns, deep buffs, dull greens, blues, reds and deep tans.



Proposed Homeopathic Hospital of Providence, R. I. Kendall, Taylor and Company, Architects

Safe colors to use are those that reflect light and make a room look more cheerful, such as cream, yellow, old gold, ivory and flesh tints.

It has been suggested that the same color should never be used on the walls and on the ceiling of a hospital room or ward, for the reason that during the long hours of his illness the patient requires something to divert his mind, and two colors offer contract. We have heard, for the same reason, the suggestion of a simple stencil border of a color similar to the wall.

We recommend the use of a semi-flat enamel or an oil flat wall finish for rooms and wards; a gloss enamel should never be used there. An enamel is best for water resistance, light reflection, bacteria resistance and service.

The natural floor should be finished with two coats of the best floor varnish on close grained woods and with filler and floor varnish on open grained woods.

Treatment of Floors and Woodwork

On a wood floor it should be remembered that the varnish used must be tough and elastic and as nearly water resistant as possible. When such a varnish is applied the surface is not only prepared to withstand frequent washing, but the pores and channel-like grain of the wood fiber are filled, thereby eliminating the dust and dirt collecting factor of unfinished floors.

It has been learned by actual test that hard spruce wood, for instance, immersed in water gains in weight per square yard 37.83 ounces, and after drying by a special process retains 1.45 ounces. A varnished panel, subjected to the same test, gained only .57 of an ounce per square yard and retained after drying only .32 of an ounce per square yard. An oiled piece of wood gained in weight 23.20 ounces and retained 2.18 ounces.

Mr. Henry A. Gardner, from whose book, *Papers on Paint and Varnish*, much of the material for this article has been obtained, says a wood panel one-half an inch thick, when exposed to moisture, may gain ten ounces per square yard in a week; when exposed to water it may gain fifty ounces.

When a wax finish is desired, the wax should be applied to the varnished surface and the floor polished with a waxing brush.

To Avoid Cement Floor Difficulties

Cement floors are water absorbent and are very retentive of dust and dirt. The surface of all cement floors should be prepared by an application of special cement paint. The proper paint on a cement floor prevents moisture from seeping in; shuts out the action of moisture, gases, steam, etc.; prevents discoloration; and eliminates the disagreeable tendency of the concrete floor to "dust up."

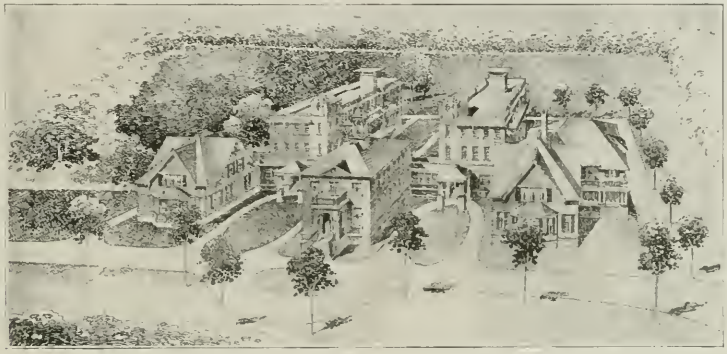
To stain and varnish new woodwork, it is necessary to apply a wood stain of the desired color, and if the wood is open grained, such as ash, oak and chestnut, the surface must be treated with a paste wood filler, using a shade which best matches the shade of the stain.

In finishing a natural oak, no stain is used; a light oak paste filler is applied and then varnished or waxed as desired, just as on open grained woods after the filler has been applied over the stain. In finishing close grained woods, such as birch, cypress, basswood and pine, the same directions should be followed except that the paste filler need not be applied.

The modern tendency is to make kitchens in hospitals and homes cheerful, hygienic and sanitary. Paint and varnish are the best germ killers known for general use. Any surface that

acts as a dirt, dust and grease catcher is a germ breeder. Walls and floors should be made washable and sanitary with paint and varnish.

A white kitchen, perhaps, is best of all, but if color is preferred, it is best to choose pale yellow,



Proposed Development for Woonsocket Hospital, Woonsocket, R. I. Kendall, Taylor and Company, Architects.

gray or light green. An oil flat wall finish or an enamel should be used. Either can be kept as spotless and free from dust as marble or tile.

Kitchen floors should be varnished or painted. The best shades for floors are tans, browns and slates, as these colors are easy to keep clean and will save hours of scrubbing.

Some Recipes for Cleaning

The limits of this article do not allow individual reference to the treatment of walls and floors in bathrooms, laboratories, lavatories, clothes closets, radiators, etc., but all of these present interesting problems.

A few suggestions and recipes, relating to the use and care of paints and varnishes in the hospital, are offered in conclusion:

For cleaning and polishing windows, mirrors, glassware:

Mix finest pumice stone in denatured alcohol; apply with a soft sponge, deftly rubbed over the glass, and then wipe off with sponge and water; after this mop the glass with a soft white cotton cloth and finally rub off and polish with a perfectly clean cloth of similar material. Use elbow grease.

For cleaning the painted or enameled surface on walls and ceilings:

Procure some of the finest whiting to be had (precipitated French chalk, entirely free from grit, is best); dip a piece of soft flannel into warm water and squeeze nearly dry; then take up with it as much of the whiting or chalk as will adhere to the flannel and apply it by moderate rubbing to the enameled or painted surface. When this has taken off the dirt and grease, wash the surface well with clear water and rub dry with a soft chamois skin. Before using the cleaning material referred to, care should be taken to have all the surface thoroughly dusted, not neglecting corners and mouldings.

To retain the brightness of a tile floor:

The addition of half a pint of kerosene oil to an ordinary bucket of water will give the best results as to bright appearance when mopping is carefully done; the addition of aqua ammonia and spirits of turpentine, say four tablespoonfuls of the former and two tablespoonfuls of the latter to a three-gallon bucket of water, will leave the tiles clean and bright, even if the mopping is done carelessly. Under no condition should soap or strong soda be used, as that tends to give the tiles an unsightly and dull appearance in a short time.

DR. SPELMAN TOURO SUPERINTENDENT

Dr. John D. Spelman, former associate director of Mt. Sinai Hospital of Cleveland, has been chosen as the new superintendent of Touro Infirmary at New Orleans to succeed the late Arthur Bramble Tipping. Dr. Spelman has some rather unusual qualifications for the new position.

The new Touro superintendent was graduated in 1911 by the medical department of the University of Cincinnati and served an internship at Jewish Hospital in that city. He took up private practice the year following and shortly after was appointed clinical instructor in medicine at the University of Cincinnati.

In 1915 Dr. Spelman was sent to Belgium by the American Red Cross and served six months under Dr. Anton Depage at LaPanne. Later he returned and saw military service on the Mexican border as captain in the medical corps of the Eleventh Provisional Division. In the World War he was commissioned major in the medical corps in charge of a field hospital. He was promoted to director of field hospitals of the Thirty-seventh Division and was discharged with the rank of lieutenant-colonel.

Upon his return to civil life Dr. Spelman took the course in hospital administration offered by his alma mater under the direction of Dr. A. C. Bachmeyer, superintendent of Cincinnati General Hospital. This course consisted of participation in the work of each department of the Cincinnati General Hospital for variable periods of time, discussion of observations made along with the considerations of accepted methods of meeting similar problems in other institutions, enrollment in established courses in institutional management and similar subjects, and field observations at Cincinnati Tuberculosis Sanatorium, Deaconess Hospital, Christ Hospital, and Good Samaritan Hospital in Cincinnati and the hospitals nearby.

The MODERN HOSPITAL

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THE SINGLE ROOM HOSPITAL: A COMMENTARY

FURTHER analysis of the proposal that all patients be installed in single rooms and that the open or congregate ward for the care of the sick be abolished is desirable. Whether one approves of the proposal or not, it is reasonable to assume that a demand for so radical a change in hospital practice would never have arisen if unmitigated large wards were perfectly adapted to the care and treatment of all classes and conditions of hospital patients at all times. The value and function of the quiet or separation room has in fact been recognized in hospital literature and practice for considerably more than a generation; but whereas one or perhaps two quiet rooms, attached to a ward unit of twenty-five or thirty beds, were considered sufficient forty years ago, and while twice that number would have been regarded as acceptable twenty years ago, it has remained for hospital idealists of the past decade to voice a demand for a separate room for every patient, regardless of medical or social classification, cost of service or any other consideration.

Those who have participated in the planning, erection and management of hospitals designed in whole or in part for private patients and experienced hospital officials generally, will not, I think, underestimate the values that inhere in single rooms. On the other hand, experience has shown the heavy cost, particularly under the conditions now existing, of that type of construction, and one cannot conscientiously disregard the lessons of experience. There are, of course, plans and plans, and hasty generalizations in regard to cost are apt to be misleading, but it is not a hasty generalization which declares that more material and more labor enter into the construction of a hospital of a given capacity, in which separate rooms of suitable size with corridors between are assigned to all patients, than enter into the making of one in which a considerable proportion of the patients are lodged in open wards. But it is not my present purpose to analyze the economics of the question or to attempt to review all of the arguments that have been adduced either in favor of or against the single room plan. Many of the arguments on both sides of the question have become trite, and their restatement would probably prove somewhat tiresome.

It may be assumed that all experienced hospital men favor the use of single rooms, first, for all patients who desire and who can afford to pay for them, and for the additional service which is indispensable to their proper care, and second, for all patients who need single rooms and individual service, whether they can afford to pay for them or not.

The real point at issue is whether or not all patients do need single rooms. To put the matter differently, are the chances of care invariably improved, is the period of treatment unquestionably shortened, is the patient's comfort necessarily enhanced, is the safety of the patient always promoted, by placing him in a single room rather than in a larger ward? The question of cost, however interesting and practical, is, to my mind, a question of secondary importance. In the present editorial I propose to confine myself to the factor of safety alone; for in the numerous contributions that have recently been made to the discussion, this aspect of the matter has received little or no attention.

We are told that in the single room hospital, in which a utility room is directly connected with each patient's room (closet would perhaps be a more accurate term than room, for latterly, faced with the question of cost, advocates of the single room hospital have been paring down single rooms to the proportions of a linen closet), the added cost of construction is, to a considerable extent, offset by the economy of labor which results from having the utilities, supplies, and fixtures that are essential to bedside nursing close at hand. The quick resulting service is presented as labor-saving, time-saving and highly beneficial

to the patient. In the now familiar presentation of the subject the drama always begins with the nurse at the bedside, it being presupposed that the nurse will be summoned, and will promptly appear at the patient's summons, whenever needed. Well, indeed, for the patient, if this were true! Unfortunately, experience teaches the contrary.

Let me now present sample records obtained from a hospital of at least average efficiency—a hospital in which the number of nurses employed for ward duty is somewhat above the average (as shown by a recent investigation), a hospital in which only a small proportion of the so-called ward patients occupy single or "separation" rooms, and in which the practice prevails of employing special or individual nurses for some but not all of the ward patients who are thus accommodated. Let us turn for enlightenment to the illuminating experience of such a hospital.

Remember the conditions: an open ward; a limited number of patients in quiet rooms; push buttons handy; floor nurses on call; special nurses assigned to certain cases whose greater need is recognized and who are, therefore, singled out for special care; other patients left alone from time to time, but provided with the means of summoning a nurse at will. Among the patients who are left alone are some who are feverish and confused, some who are timid, others who are impatient and irritable, many who are ignorant—in a word, just the common ordinary run of human beings in ordinary circumstances, with the average capacity of the uneducated in strange surroundings, but with their normal intelligence often clouded and their slight capacity for adaptation lowered by sickness.

I shall now present actual case reports, prepared and submitted under a standing hospital rule that all "accidents" must be promptly reported in writing by the responsible house officers and nurses to the hospital administration:

Case I. At about 9:50 p.m., J. E., room —, first day post-operative for acute appendicitis, with peritonitis, got out of bed and walked into the hall, where he was discovered and put back to bed.

Case II. Last night I relieved a nurse in Ward — for supper; while I was sponging a patient on the ward, an orderly came and told me that S. H., a patient in a back room, had fallen out of bed, and that he had put him back in bed. I went in immediately, found the patient apparently uninjured by the fall. His pulse was 80, and a good quality. I immediately notified Dr. ——.

Case III. At 1:30 a.m., I. K., a patient in room —, got out of bed, and walked into the hall. On seeing the patient, I immediately put him back in bed, and notified the house physician.

Case IV. I was obliged to leave P. T., an operative of yesterday, bilateral hernioplasty, for a few minutes this morning in order to prepare breakfast. While I was thus engaged the boy got out of bed. The crib sides were up and a restraining sheet was on.

Case V. E. W., Ward —, diagnosis carcinoma of signoid, complication post-operative pneumonia. At noon yesterday the patient was given a bedpan, the orderly being at lunch. At this time Miss M. relief nurse, was pouring medication, and I was cleaning the medicine chest. A few minutes later ward patient called out. Responding immediately, I found E. W. out of bed, sitting on a chair. The patient was at once put back to bed. There was no apparent change in his condition, except a markedly increased pulse rate.

Case VI. At 11:30 p.m., patient on Ward — got out of bed and was found sitting on a chair by the bed. She was examined shortly after by Dr. ——, and her condition was found to be unchanged. She is a patient suffering from myocardial insufficiency, and there were sideboards on her bed. The accident occurred while the nurse was attending to a patient in one of the back rooms.

Case VII. At 3:30 a.m., D. W., a Ward — patient, fell out of bed. When examined by me, the patient was found to have an abrasion on the third finger of the right hand. This patient was suffering from diabetes and pneumonia. The accident occurred while the nurse was attending to a patient in one of the back rooms.

Case VIII. F. A., a patient of Dr. L., room —, at 7 p.m., yesterday, opened the window and threatened to jump out. She was put back in bed. The patient seemed perfectly rational otherwise.

Any hospital which studiously records its experience can present abundant material of a similar kind. The lesson, I think, is plain. As I read it, it is this: A hospital which places a sick person alone in a room, without immediate supervision, assumes a serious responsibility; the patient who is thus left alone runs a serious risk.

It is the duty of every hospital to provide single rooms for a certain proportion of its ward patients, whatever the cost may be; but let us remember that with every extension of this type of service, additions to the nursing force must be provided as a measure of safety.

I was about to conclude with the statement that in supervision lies safety, and in supervision only. But perhaps I am all wrong; perhaps the time has come (I believe that a recent writer seriously proposed something of the sort) for the hospitals of America to adopt the practice of Japan, where it is the custom to invite the relatives and friends of patients to come and stay at the hospital to take care of their sick, to cook for them and feed them, and to give them the prescribed medication (and any other medication of their own choosing). I must confess that I was

not much impressed with this kind of hospital care when I saw it in Japan recently; but it is quite possible that my judgment has been warped by long contact with American hospital conditions. If the Japanese system is good enough for America, the single-room radicals are right and I, a separation-room moderate, am wrong. It is for the sane and experienced hospital superintendents of America to decide.—S. S. GOLDWATER, M.D.

DEMONSTRATIONS IN NEARBY CITIES AS SUPPLEMENT TO CONVENTION

THERE is a concomitant phase of the annual conference of the American Hospital Association that the Association has not thus far taken the initiative in developing to its fullest possibilities. We refer to the opportunity that exists for its delegates and members to attend well organized demonstrations of various timely or outstanding aspects of hospital development or procedure immediately before and after the convention. Often the convention offers the superintendent the only opportunity he has in the course of the year to see at first hand some of the significant things other institutions are doing. But the services of the American Hospital Association in helping him to make the most of his opportunity have hitherto been practically negligible.

Left to his own initiative, the individual superintendent who is seeking light on some special, and perhaps to him perplexing, problem, may, if he happens to know where to go, find the help he is seeking. Frequently, however, his search means the loss of valuable time and the expenditure of unnecessary effort. Now and again local groups, seeing the need and opportunity, have taken it upon themselves, quite apart from any action by the national association, to put the visiting superintendent in touch with some of the local institutions. Commendable as these efforts are, the superintendent all too often is escorted about by an ill-informed guide, blissfully ignorant of the visitor's immediate interest and of the institution's ability to satisfy it. At best, this is a tiresome and deadly procedure.

THE MODERN HOSPITAL has long held that there was a better way, the inauguration of which hospitals superintendents and trustees would welcome; and some time ago suggested that, in connection with the 1922 annual meeting at Atlantic City, local committees be appointed in several of the large cities nearby; let us say, Baltimore, New York and Philadelphia, whose duty it would be to plan definite demonstrations in certain of the hospitals and then see that they are run off on a very definite but not too crowded schedule.

Let us assume, for example, that such a committee is at work in New York. For the superintendent who is interested in group practice by the medical staff of a hospital, what could be more profitable than a morning at the Broad Street Hospital with the medical group in full swing? Perhaps Dr. J. Barker Savage, the wide-awake executive of this uniquely situated institution, the standing of which was greatly enhanced by the expeditious manner in which it handled the victims of the Wall Street bomb explosion, could be induced to talk briefly on the subject of group diagnosis and treatment as it has been evolved in his institution. Organizing medical skill, so that persons with moderate incomes can utilize it at a price within their means, is a pressing subject. The Cornell Pay Clinic is making a practical contribution to the solution of this problem, and some of the delegates would undoubtedly wish to visit it on their way to or from Atlantic City.

Delegates interested in the training of nurses would welcome an opportunity to inspect the building at Mount Sinai Hospital which has been remodeled and set aside exclusively for the use of its school of nursing.

Others will wish to study Mount Sinai's methods of conducting its dietetic department and to have a word from Miss Graves, who is now supervising dietitian of this institution.

The war stimulated an interest in the physical rehabilitation of the handicapped, and some of the delegates to the conference would undoubtedly wish to see the notable work now being done at The Reconstruction Hospital, where many of the methods and appliances evolved during the war are being used in the restoration of workmen handicapped in industry.

One of the subjects under active discussion just at present is the abolition of wards in hospitals and the substitution of individual rooms throughout. The new Fifth Avenue Hospital is one of the outstanding embodiments of the individual room idea and will warrant careful study. Perhaps no other institution in the country handles more emergency cases than does Bellevue and Allied Hospitals. Its emergency department is well organized, and well worth while visiting by any interested in this subject.

These are but a few of the possibilities New York offers. Others will readily suggest themselves to any committee that may be appointed. The immediate consideration, however, is to have a well organized program of visits and demonstrations and a carefully chosen group of local representatives to see that the program is carried out on scheduled time.

AT THE SIDE OF THE ARCHITECT

TAKING the hospital buildings of this country and Canada by and large, we think it may be safely asserted that, with relatively few exceptions, they more nearly represent the ideas of the architect than those of the superintendent in such matters as the main units of the structure, their size, their relation to each other and their permanent equipment. This is in all probability due to the fact that it seldom occurs to the average superintendent to map out more or less in detail, for the use of the architect, the program of operation for the new hospital, or to visualize the plan he would like to have the architect execute in order to fulfill the purpose of the institution.

Under these circumstances one of two things eventuates. From the very outset a new hospital is planned by an architect inexperienced in hospital building, who either slavishly follows the plans of some similar institution—its mistakes as well as its triumphs—or incorporates in his plan a medley of ideas gleaned from a study of the plans of other hospitals; or it is planned by an architect who is as conversant with hospital planning as one who has not actually administered an institution can be. In neither case has it been possible to focus on the problem the knowledge and insight of the experienced hospital executive.

Two factors of late have in some instances served to mitigate this situation: on the one hand, hospital architects (and they are few in number) who have specialized to the point of actually entering the field of professional hospital management, and on the other hand thoroughly competent hospital consultants (and they, too, are few in number).

But who among the architects, even those who may rightfully lay claim to the title of hospital architect, will contend that this is a desirable situation and should continue to prevail? They are few indeed, if the statement of no less a person than Mr. Henry H. Kendall, the president of the American Institute of Architects, (see page 211 of this issue) may be regarded as a true reflection of the mature opinion of the architectural profession as a whole. "The superintendent," says Mr. Kendall, "is usually the authorized spokesman of the employing body, and rightly so. He alone has his hand and mind upon every detail of the organized work of the hospital. He knows the details of procedure as no member of the board or building committee can. He understands the daily routine of administration and what the duties of each group or individual are. He has had a part in the management of other institutions and knows, often from bitter experience, what errors in planning or arrangement can be made. If a man of force and ability, he will have definite ideas as to where and how he wishes his units arranged; all of this information he will bring to his architect. On the other hand, the architect, if he is the man of experience he should be, will be able to bring to such consideration other solutions of kindred, if not identical, problems."

In other words, the hospital of the future, instead of embodying as it has done all too often in the past the ideas of the architect solely, will be the joint product of the architect and the hospital executive.

That many superintendents in the past (and some at present) have not been competent to give authoritative instructions to the hospital architect as to the basic requirements of new hospital structure, the size of its integral parts, their interrelation and their permanent equipment, is freely conceded; but, with what promises to be a rapid growth of hospital management as a profession, we shall find the hospital superintendent assuming his rightful place in planning the hospital of the future. That place will be at the side of the hospital architect.

CONVENTION ON "MILLION DOLLAR PIER"

NOW that the Middle West and Canada have had the annual conference of the American Hospital Association during the past three years, it has seemed desirable to the Association trustees that the 1922 meeting be held in the East. Atlantic City has been chosen, and the meeting will be held on the "Million Dollar Pier," September 25 to 29.

Before reaching this decision the trustees entertained invitations from a number of cities in the East, but none of these cities possessed hotels combining all the facilities needed for the convention—a sufficient number of rooms, meeting halls adequate in number and capacity, and the requisite amount of space for the exposition.

Conventions of the Association held wholly within hotels are evidently a thing of the past. The "Million Dollar Pier" affords adequate accommodations for the general sessions of the convention, for concurrent sectional meetings and abundant space for the exposition as well. Within convenient walking distance are hotel rooms in abundance, with a wide range of rates guaranteed by Atlantic City's convention bureau.

In this connection the attention of Association officials in charge of the program is called to the suggestion we made after last year's meeting in

regard to reducing the number and the length of papers on the formal program. This suggestion was based on rather widespread criticism of the unreasonably crowded program of papers and addresses, one of them in particular taking fully two hours to read. We believe that the real purpose of the convention is in some measure defeated by too many papers. Despite every good intention, interest flags during the latter half of the conference. What difference does it make in the long run of year if on this particular occasion four or five fewer papers are read? Let there be but two sessions each day, and thereby give delegates great opportunity for informal conference, for the inspection of exhibits and for the recreational opportunities Atlantic City offers. Their interest in such papers as are read will be all the greater.

HOSPITAL PUBLICITY

MANY hospitals wait until they need public support before they tell about themselves. This is true almost without exception of all hospitals. There is a good reason for it. Physicians have been trained to avoid publicity in their private practice, because it is contrary to the ethics of the profession to indulge in advertising, which is publicity. Many hospitals are managed by physicians or boards of physicians, and while their code of ethics does not prohibit publicity for the hospital they are not prepared to be whole-heartedly in favor of it. And even if they desire to keep the institution before the public they do not know how to accomplish this aim.

The hospital that derives its funds from the public and that appeals to the public for its patients owes it to that public to let it know in detail how every penny is expended. The public is interested in knowing that its contributions bring good results. In other words, the hospital is the public's institution. Publicity is no more or less than a medium through which the institution from day to day advises its public of its work. It is not fair for the hospital to allow ten months of the year to pass in silence and then, preliminary to a money solicitation, begin to bombard the giving public with facts concerning itself. Such a course is almost insulting. The public's reaction is natural when it replies, "You pay no attention to me until you want something. After I have given, you close up and let me know nothing more for a year."

The local hospital should keep in contact with its community twelve months in the year, year in and year out. Let the hospital make it known that it considers itself a part of the community and asks support solely on that ground.

A POWER IN BRITISH HOSPITALS

SIR ARTHUR STANLEY

SIR ARTHUR STANLEY, president of the British Hospital Association, is closely identified with hospital and health work and through his many connections with health organizations has contributed much to human welfare in Great Britain. He is treasurer of St. Thomas' Hospital, chairman of a Joint Council of the British Red Cross Society and the Order of St. John, a member of the board of governors of the League of Red Cross Societies formed under the covenant of the League of Nations, chairman of the National Association for the Prevention of Tuberculosis and holds office and membership in several other organizations of that character.

At the beginning of the war Sir Arthur accepted the chairmanship of the British Red Cross Society and when later in 1914 a joint committee of the British Red Cross Society and the Order of St. John was formed he was made chairman and served during the entire war period. In this capacity he had an opportunity to study the status of the nursing profession and from his findings arose the College of Nursing, an institution solely for nurses and governed by them.

Sir Arthur is the son of the late Earl of Derby and from 1898 to 1918 was a Member of Parliament for the Ormskirk Division of Lancs. His increasing philanthropic duties made it necessary for him to relinquish his seat. In 1918 the French government conferred on him the Commandership of the Legion of Honor.

THE REAL MEANING OF A HOSPITAL STAFF*

By REV. M. P. BOURKE, A.M., LL.B., Chaplain, St. Joseph's Sanitarium, Ann Arbor, Mich., and Director of Catholic Hospitals, Diocese of Detroit

ON MARCH 1, 1918, the American College of Surgeons forwarded to the hospitals of the United States and to the Fellows of the College its now famous plan for a minimum standard. Part of this plan had of necessity special reference to hospital staffs. It was in my judgment the most comprehensive and at the same time the most practical and reasonable plan ever suggested for hospital betterment. Many of us disagreed, and I think rightly so too, with some of its provisions. I for one thought that in some of its features it stressed the material to the detriment and, in some measure, the complete obliteration of the spiritual. But I know that in giving it out the committee was obliged to have in mind conditions I could not foresee, and I think I had the good sense to know that nothing human can ever be either ideal or complete. I have often wondered if full credit will ever be given to the man who above all others was responsible for the almost universal adoption of this standard, John G. Bowman, the present scholarly and capable chancellor of the University of Pittsburgh.

Let me quote from the bulletin of the College (Vol. IV, No. 4) a few of the provisions of this standard, before, with this for a basis, I address myself to the specific theme of this morning. The minimum standard is thus summarized in this publication.

Minimum Standards of Hospital Staff

"1. That physicians and surgeons privileged to practice in the hospital be organized as a definite group or staff. Such organization has nothing to do with the question as to whether the hospital is 'open' or 'closed'; nor need it affect the various existing types of staff organization. The word staff is here defined as the group of doctors who practice in the hospital inclusive of all groups such as the 'regular staff,' the 'visiting staff,' and the 'associate staff.'

"2. That membership upon the staff be restricted to physicians and surgeons who are (a) competent in their respective fields, and (b) worthy in character and in matters of professional ethics; that in this latter connection the practice of the division of fees, under any guise whatever, be prohibited.

"3. That the staff initiate and, with the approval of the governing board of the hospital, adopt rules, regulations, and policies governing the professional work of the hospital; that these rules, regulations and policies specifically provide: (a) That staff meetings be held at least once each month. (In large hospitals the departments may choose to meet separately.) (b) That the staff review and analyze at regular intervals the clinical experience of the staff in the various departments of the hospital, such as medicine, surgery and obstetrics; the clinical records of patients, free and pay, to be the basis for such reviews and analyses.

"4. That accurate and complete case records be written for all patients and filed in an accessible manner in the hospital, a complete case record being one, except in an emergency, which includes the personal history; the physical examination with clinical, pathological, and x-ray findings when indicated; the working diagnosis, the treatment, medical and surgical; the medical progress; the condition on discharge, with final diagnosis; and, in case of death, the autopsy findings when available.

"5. That clinical laboratory facilities be available for the study, diagnoses, and treatment of patients, these facilities to include at least chemical, bacteriological, serological, histological, radiographic, and fluoroscopic service in charge of trained technicians."

Hospitals Far Below Standard

Now let me ask, with this for a reasonable standard, how many real hospital staffs are there in existence in the United States today? I think I can say without fear of contradiction that there are not half a dozen hospital staffs in America, in the real meaning of this term. The unfortunate mental attitude of the average doctor leads him to the conclusion that a hospital owes him everything, and that he has very few corresponding obligations to the hospital. That is a broad statement. Upon what do I predicate it? Starting with the undisputed acknowledgment that the first and the real objective of a hospital is the good of the individual patient, to what conclusions are we led?

First: A patient coming to a hospital is the exclusive charge of no one man. If he is, then the term "staff" is a ridiculous misnomer. Now by that I mean that every patient has a right in justice to the best that the hospital can give. If his attending physician feels that he can be more competently attended by some other member of the hospital group, then why should he be denied this advantage? If the attending physician feels that there are features of a patient's case that call for other expert advice and attention, why should the patient be denied this advantage?

Individual Efforts Instead of Cooperation

You may tell me that this practice of referring cases is impractical. I tell you that it has proved eminently practical in the few places where it has been fairly tried. And the doctors are none the worse for their fairness, because reciprocal exchange about equalizes matters between them. What is a staff after all if you do develop group service? It is just a list of doctors accorded the courtesy of practicing in the same house. There is no coordination; no mutual cooperation for the benefit of all the patients; nothing but individual effort with merely nominal centralization. Outside of the facilities offered by a well conducted hospital, the patient is no better served in a medical way than if he had been attended in his own home. And this is not my idea of efficient staff organization.

Now mark you, I do not maintain that a doctor must relinquish all claim to his patients when they enter the portals of an institution of whose staff he is a member, but I do maintain that he must have always in mind the greatest good of the sufferer; and that he should be prepared in justice to see to it that this right of the patient is respected even though at times it may result in some financial loss to himself. He is not going to lose his practice in that way. He is going rather to obtain increased respect for himself, and no one will take advantage of his fairness to deprive him of his practice but an unpro-

*Read at the fifth meeting of the Michigan Hospital Association, Flint, Mich., January 19, 1922.

fessional ingrate,—and there is no room on any decent staff for practitioners of that type.

Staff Meeting Apt to Be Burlesque

Second: One of the requirements of the minimum standard as outlined is a monthly staff meeting to be attended by every man practicing in the hospital. This can mean everything, or it can, and usually does, mean *nothing.* A review and analysis of the clinical experience of a staff is invaluable if rightly conducted. Deaths and unimproved cases can be discussed; laboratory findings presented; the result of autopsies shown; symptoms reviewed. If however this discussion is to take the form of a mere routine recital of procedure and findings without honest criticism; or if the staff members are so delicately considerate of the feelings of each other that they are afraid to air their views of methods, diagnoses, and treatments honestly, then the whole affair is a monumental burlesque. A modern day staff meeting is a consultation on a larger scale. And it loses the benefit of this feature if its members are too thin-skinned to speak their honest convictions. Why should I, as a member of a staff, sit silently by listening to a fellow practitioner's narrative, when I am positive he is omitting symptoms (honestly of course) that change the entire nature of the case under discussion? Why should I not inquire as to manifest departures in treatment from the conventional and the well approved? Why should I not make inquiries as to a failure to adopt new methods, late scientific findings, up-to-date appliances? And yet I am talking to a group of hospital executives, and it would be interesting to know how many of your staffs actually do put these expedients into practice. No one's feelings should be hurt by honest criticism; the young especially will be benefitted; and the clash of exchanging thought will give birth to new ideas that will put your institution on the map.

Chief of Staff Must Be Fearless

Third: I often ask myself if the ordinary staff really exercises fair judgment in the selection of a chief. Years alone are not test. Experience is an aid, but it is the combination of both, in conjunction with real ability, that points the ideal. At times I wonder if my notion of a chief-of-staff is fully orthodox. I do not believe this office is an ornament, a reward for years of service, or a sinecure. A man need not be picturesque to fulfill its duties well, but he *must* be competent and honest and respected by his colleagues. He should be a chief in truth. He should be capable of supervising the work of the medical and surgical departments of his trust. He should be big enough to command respect, and fearless in his demands for the right. My own impression is that he should be a general surgeon, with sufficient experience and ability to supervise the work of his fellow staff members. He ought to be considerate but he must be firm in upholding the standards of his profession. It does not require much perception to note that there are many men practicing medicine today,—surgery in particular—who are utterly lacking in the essentials for success. The chief-of-staff has the bounden duty to see to it that such men have competent help, make improvement, or be denied the privilege of the house. Faulty technique, carelessness in asepsis, slovenly aftercare of patients, negligence in diagnosis,—these, every one of them, are his to correct in person or as head of a properly selected committee. Am I putting too much on the shoulders of the chief? John B. Murphy did this in Chicago for many years, and I can name a few who are doing it exceptionally well today. What I have to say in this connection does not, of course, apply in all respects to those institutions that are directed by competent medical supervisors.

Fourth: One adjunct of the staff should never be lacking,—and that is a well chosen independent record committee. A part of each month's order of business should be a report on the records of the staff. Mistakes must be honestly pointed out; omissions must be noted; improper notations corrected. When records call for signature the signature must not be lacking. This work cannot be delegated. A fair proportion of it belongs not to the intern or nurse, but to the doctor in attendance. And the staff should insist upon its proper and timely performance. One of the burdens of the record-keeper's existence is found in a refusal of members of the staff to work up and sign the records of their case. Strangely enough it is frequently the men least heavily burdened professionally who have the least time for this all important duty. No staff can afford to overlook such a lamentable shortcoming. If a doctor is too busy to keep his records in order, he is really too busy to be connected with the hospital. And where the report of the record-keeper and the record committee disclose chronic laxity in this important duty, provision for automatic expulsion should be provided by the hospital regulations.

Record Committee Makes for Accuracy

Not many hospitals have a record committee of the staff. In this they are unquestionably the losers. The psychological effect of realizing that once every month, on a fixed and certain day, your records will be scrutinized by a group of your fellow doctors makes for accuracy, regularity and completeness.

What right have you moreover to tolerate on your staff a man whose slovenly habits, or careless conduct, endanger your hospital rating? The hospital visitor may found his report of an inferior rating upon the negligence of this very man. And it is the duty of the staff to protect the hospital by reasonably warning this delinquent, and then summarily dismissing him if the warning goes unheeded.

The surest guaranty of good records is a competent record committee of the staff, and its appointment I heartily commend to every hospital in the land.

Fifth: The last requirement of the minimum standard relates to the clinical laboratory. The work of the laboratory, pathological and x-ray, is one of the prominent wonders of the day. It affords facilities for diagnosis and treatment that are nothing short of marvelous. And the well managed staff should see that these institutions are properly maintained. Fixed routine for certain examinations should be rigidly insisted upon. The golden rule has broadest scope in this division of the hospital. We have no right to overlook in the case of others what we should unfailingly insist upon in the care of ourselves or our families.

Too Great Dependence on Laboratory

The staff should take summary action against the man who will dare to perform a nephrectomy without previous cystoscopic exploration. The staff should visit with extreme penalty the surgeon who will dare to make an incision without proper urinalysis and serological findings. The staff is in duty bound to remonstrate in no uncertain terms with the otolaryngologist who will undertake to perform a tonsillectomy without proper tests for blood coagulation. All of these things I base of course upon the assumption that the cases in question are regular, and not extraordinary instances of emergency.

By a paradox, if you will, I think the pathological,

bacteriological, serological and x-ray laboratories, wonderful as I acknowledge them to be, have done no little harm to the profession. The young man of today is forgetting how to use his eyes and his ears and his fingers. He is depending for his diagnosis on the laboratory man. And the years to come will show how truly unfortunate this is. The laboratory is a check; it should not be used except for the confirmation of a diagnosis. Exceptions to this will be found to be sure, but that is the rule, none the less.

Valuable time is lost nowadays by too servile dependence on the laboratory. And its most glaring instance is met with in the case of contagious and infectious diseases.

But the good laboratory must be encouraged by the medical staff of the hospital. And the good laboratory man is a real treasure.

So much for my opinion of the duties of the staff in specie. Let me add one word of general exhortation. Please try to eliminate discord from your hospital staff. Select representatives for your various departments that are not alone capable but companionable if possible. And keep off your regular associate and visiting staffs the incompetent and the quarrelsome. They are expensive at any price.

Do not forget that you owe your hospital a duty, larger in a certain measure than it owes you. Labor for harmony, but never at the expense of honesty. Give of your best to the hospital that honors you with a place of trust in its affairs, and the return will always be proportioned to your bounty. The dividends in the medical investment always bear some relation to the capital placed in the venture.

A LABORATORY IN THE SMALL HOSPITAL*

By S. G. DAVIDSON, Superintendent, Rockford Hospital, Rockford, Ill.

Two essentials in establishing and maintaining a laboratory in connection with a hospital, be it large or small, are, according to Mr. Davidson, a well-paid pathologist and excellent equipment. Neither of these requirements makes the laboratory prohibitive to the small hospital, for a minimum list of high grade equipment can be purchased for between $600 and $900 and a good pathologist can prove himself so indispensable and make the laboratory so profitable that he will earn a neat salary. Conversely no hospital even in the smallest community can afford to struggle with cheap equipment or to employ a poorly trained laboratory worker at any salary. The experiences of three Rockford, Ill., hospitals in starting a laboratory should prove inspiring to superintendents, trustees and physicians in small cities who have long recognized the value and felt the loss of laboratory facilities.

CAN we afford a laboratory? How can we finance it? What is the cost of operation? What equipment do we actually need? The problem of the laboratory is one of the colossal ones which face the management of many of our smaller hospitals; too often the answer is, "We will have to get along without it for a time." Such an answer grows out of the fact that boards of trustees and many superintendents do not recognize its value.

No hospital can afford to operate without its laboratory; and a corollary to this is that no hospital can afford to operate a laboratory unless the work is being performed by a competent man or woman. We all know that good medical practice must be based on correct diagnosis. It is perhaps the most important function of a hospital to provide every possible facility for correct diagnosis and treatment. Although the laboratory is a prime necessity in rendering this service, there are many institutions proceeding year after year without a well equipped diagnostic department. This little paper is written with the hope that it may assist boards of trustees and superintendents who are considering the installation of such a department.

Recently we have installed a laboratory in a hospital of 110 beds in our city of 70,000, situated 100 miles from Chicago and 75 miles from Madison, Wis. There are two other hospitals in this city, one of 75 and the other of 125 beds. None of these institutions had any laboratory facilities, excepting our own which had some small equipment for making urine analysis, a sink, a microscope, and a small centrifuge which we later had to scrap. In the city are ninety practicing physicians and, of course, the usual number of men in the smaller surrounding towns. The only laboratory service in the city was that maintained by a physician, operating a private laboratory. These facts are being presented because they all have a bearing upon the establishment of laboratories. The proximity of such cities as Chicago and Madison (with its university) made it possible for physicians to send specimens to those places for examination.

That there was no laboratory service in the local hospital demonstrated its need; it was appalling that graduates of high class schools of medicine were compelled to practice their professions under such antiquated conditions. To find space for the laboratory, once we decided upon it, was easy. There is always some odd room in any hospital that can be utilized. We were particularly fortunate in being able to use a room with light on three sides, north, south and west. We had an old stone sink and a Baush and Lomb microscope. We obtained price lists from laboratory supply companies in Chicago, New York, and Philadelphia. The names of these firms were obtained from The Modern Hospital Year Book. We studied the prices on the equipment very carefully. From our analysis we found we could equip the laboratory for approximately $1,500.

By talking among friends of the institution the need of this service and its benefits to the community, we persuaded a well-to-do woman to give us the laboratory equipment as a memorial to her father. Our next thought was to get a competent pathologist. We wrote to all of the Class A medical schools in the country, setting forth the conditions and prospects in Rockford with the written assurance that the right type of man could quickly build up a compensation of, at least, $6,000 a year. Also we advertised in the A. M. A. Journal and were fortunate in obtaining the service of a man who had been associate professor of pathology at one of the large medical schools of Chicago and in charge of the laboratory in the hospital connected with that school. In this connection I wish to emphasize the fact that no matter

*Read at the annual conference of the American Hospital Association at West Baden, Sept. 12-16, 1921.

how small the hospital or the community, it can afford to pay a good salary to a good pathologist and conversely it can not afford to employ any poorly equipped laboratory worker. Even our larger hospitals have made the serious mistake of paying day-laborer's wage to their pathologist until conditions have become such that few medical men specialize in this branch of the profession. None of our equipment was purchased until we had hired our pathologist; with his advice we purchased it in Chicago for the sum of $1,588. Included in our purchases were all the equipment, glass ware, and reagents necessary for a laboratory capable of doing the work for the three hospitals. It is all of the best material.

Financing the Laboratory

How best to finance the laboratory was another one of our problems, and after a thorough discussion with the staff we decided to increase the rates fifty cents per day on all beds in the hospital, then on every bill paid to deduct that amount and credit it to the laboratory account. This additional charge was based on the number of patient days in 1920, which amounted to a little over 32,000, or a probable income of $16,000, provided everyone paid his bill; in any event it must give us an income of at least $10,000, and after deducting $3,500 for the minimum salary of our pathologist and estimating our laboratory expenses at $1,500, we would still have $5,000 to be divided equally between the hospital and the pathologist, thereby making his compensation $6,000 for the first year. In addition we felt we would have considerable income from outside work. This is proving to be the case. Last summer our hospital ran very light, and in the face of this we showed a net profit each month. Our doctors are delighted with the laboratory and are using it as a strong talking point, not only because of the service it renders but also because this service is practically free.

There are, of course, many other methods of making laboratory charges. There is a flat rate for each patient who comes into the hospital which very often forms the basis of financing the work. And there is the method of charging on a fee basis, although I believe that this is by far less successful because charges may seem excessive to the patient and as a consequence less laboratory work will be done. Of course, the ideal condition is to have the laboratory endowed.

Equipment Not Expensive

As I stated before, our laboratory is equipped to take care of all the work in the city of Rockford, so you will realize it must be complete. But in smaller communities or smaller hospitals there is not the need for such elaborate, expensive or complete equipment. We have studied the needs and problems of small laboratories carefully and in a hospital of forty or forty-five beds, serving a community of from 10,000 to 20,000 people, the laboratory can be provided at a cost of between $600 and $900. The equipment listed at the end of this paper costs approximately $800, although there is no microscope or colorimeter listed. Microscopes can be purchased for $110, and no matter how small the hospital there is usually a microscope in the institution which the doctors have used for their smaller routine work. This list also includes equipment which can be dispensed with, as, for instance, the autoclave listed at $200. For a small hospital, one costing from $75 to $100 will do as well, or why use an autoclave at all? All sterilizing can be performed in the autoclave of the operating room and this would mean a considerable saving. There is no need of a Wassermann bath if the expense is too great, because a laboratory man can use the incubator for blood cultures and Wassermanns. A good combination microtone should be purchased, and if the hospital then desires to cut expenses there will be no need of having a paraffine oven for, unless there is a great deal of section work, all examinations can be made frozen sections. The best microtone can cut as thin as five micromes, which is about the same as a paraffine section cuts. The incubator listed is large enough for a 300 bed hospital and one could be purchased half this size which would do all the work. I do believe, however, a colorimeter should be purchased so that the laboratory may do all kinds of work, including blood chemistry. Such a colorimeter can be purchased for $125.

The two points I wish most to emphasize in this paper are that a good pathologist be employed and a good salary paid or guaranteed him and that good equipment be purchased even though, in so doing, it compels the laboratory worker to use such combinations as have been noted. With a high type of laboratory work turned out, business will so increase as to permit the institution very quickly to add to its equipment.

Equipment for Small Laboratory

Incubator for all bacteriological cultures and Wassermanns	$90-$137.50	Test tubes	10.00
Autoclave	75- 200.00	2 Bunsen burners	3.00
Test tube baskets, 60c each	1.80	Filter paper, 3", 5" and 13"	3.00
Plantmour hot water funnel, copper	7.25	1 Levy counting chamber.	7.00
Centrifuge	54.50	Red and white blood pipettes	1.50
2 chemical thermometers, 110 c.	1.25	Tallquist hemoglobin scale	1.75
2 chemical thermometers, 250 c.	2.00	1 trip scale	10.00
Balance	60.00	1 set weights	3.60
B. & L. combination microtome, complete	108.50	Platinum needles, each	1.20
Paraffine oven	50.00	Corks and rubber stoppers	3.00
4 section lifters	3.00	Cork borer	1.75
1 doz. camels hair brushes	.35	Glass pencils	.25
1 doz. teasing needles	.50	Nichrome wire	.75
2 test tube racks	2.00	1 doz. pincheocks	1.80
2 iron retort stands	3.00	1 doz. Coplin jars	4.40
1 iron purette stand	1.50	1 Esbach albuminometer	1.20
1 Chapman filter pump	2.00	Urinometer	1.00
1 water bath	2.25	Urinometer jars, each	.12
2 tripods	1.20	Evaporating dishes	2.00
Wire gauge, 6x6	1.08	Mortar and pestle	.75
Graduated cylinders	5.00	Pipettes	5.00
		Flasks	15.00
		Beakers	15.00
		Stains and chemicals	50.00
		Rubber and glass tubing	5.00

ANNUAL REPORT COMMITTEE NAMED

Announcement has been made by trustees of the American Hospital Association of the appointment of a committee to develop a standard form of the essentials of the annual report, as was authorized by the last annual conference. The personnel of the committee is the same as that of the hospital forms committee, which includes: Dr. A. C. Bachmeyer, superintendent of the Cincinnati General Hospital, as chairman; F. E. Chapman, superintendent of Mount Sinai Hospital at Cleveland; and Dr. John F. Bresnahan, superintendent of Bridgeport Hospital at Bridgeport, Conn.

INSTALLS POWERFUL X-RAY MACHINES

Apparatus for the x-ray department of the Grace Hospital of Detroit for use in treatment of deep-seated cancer is being installed as a result of a recent $10,000 appropriation for that purpose by the board of trustees. Building alterations necessary for the installment of the large machines, which have proved highly successful for the treatment of deep-seated cancer in Germany, have been made. This apparatus is the first of the kind to be installed in Detroit.

It is not life to live, but to be well.—Martial.

NURSING AND THE HOSPITAL

Conducted by CAROLYN E. GRAY, R.N.,
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THE SUPERINTENDENT OF NURSES: HER SALARY

By JOSEPH J. WEBER, Managing Editor, The Modern Hospital, Chicago

WOULD $1,868 per annum, plus quarters, subsistence and starched laundry, be remuneration ample for the sundry duties, executive, professional and scholastic, incumbent upon a superintendent of nurses?

Whether it be sufficient or insufficient—surely none is so bold as to argue its oversufficiency—that is the precise yearly wage of superintendents of nurses and heads of training schools in the United States, according to statistics compiled by The Modern Hospital based on data gathered from hospitals in various states in proportion to population. The monthly check, then, would pay to the order of Average Superintendent of Nurses $155.67. Out of this need come no room rent, no board bill, and funds for only such laundry as dare not be intrusted to ruthless modern machinery.

To make this brief survey of any statistical value, questionnaires were dispatched to 500 hospitals in the United States of less than 100 beds, distributed among the various states in the ratio which the population of each state bore to that of the nation according to the 1910 census. Out of this number, 112 hospitals, or 22 per cent, responded.

Questionnaires were also sent to 285 non-Catholic hospitals of 100 beds or more selected from the 1920 approved list of the American College of Surgeons. These hospitals were of wide distribution not only in the United States but in Canada. Of these institutions, 116, or 40 per cent, sent data.

With no appreciable variation these figures show that hospitals furnish board, room and laundry, or some part thereof, to all superintendents of nurses or of nurses' training schools. Each superintendent of nurses was asked in the questionnaire to estimate the monetary value of these items. Rather greater differences were discovered in these estimates than can be traced to varying living costs in urban and in small community centers. Some superintendents of nurses may have based their estimates on the actual cost of such service to the institution; others, more correctly for the purposes of this survey, may have calculated living costs as they would have to be met outside the hospital walls.

The average yearly living expenses provided by hospitals of less than 100 beds to superintendents of nurses is estimated at slightly over $500. Some estimates for board, room and laundry are as low as $300. In metropolitan hospitals falling in the group of 500 beds and over, yearly living costs provided by hospitals, as estimated, average $950. Some estimates run as high as $1,800; others touched the low level of costs in the smaller cities.

To place the hospitals on an equitable basis for comparison, those of the first group were separated into three classes: 1 to 49 beds; 50 to 74 beds; and 75 to 99 beds.

Similarly the 116 hospitals in the second group were classified as follows: 100 to 199 beds; 200 to 299 beds; 300 to 399 beds; 400 to 499 beds; and 500 and more beds.

In point of actual cash, high money in the superintendent of nursing field goes to the head of a western university hospital training school who gets $4,000. She, however, is furnished her meals only. The superintendent of nurses in a 2,700 bed institution receives $3,600; she estimates the value of living costs furnished her by the hospital as $600. As to what that $600 includes, the facts are incomplete.

Although financial reward certainly is not the primary motive with many superintendents of nurses—else another profession might have been chosen—love of the work must be practically the sole influence of one superintendent in a hospital of 120 beds. She is paid in cold, hard cash the munificent yearly stipend of $300. This superintendent estimates that $480 in food, quarters and laundry work is furnished her by the institution. Although her name may be emblazoned in giant characters on the Book of Good Deeds, she is not among those noted in the income tax lists, that highly desirable, if inconvenient, status.

Many of the smaller institutions, notably those of 50 beds or less, combine the positions of hospital superintendent and superintendent of nurses. There is a liberal range in salaries paid for such services; $1,730 is the average annual wage.

The high salary mark among the small hospitals (less than 100 beds) is $2,400. Two superintendents in Group I have attained this maximum.

In the large institutions 32 superintendents, or 27 per cent only, receive more than $2,000.

With advancing living costs, nursing superintendents' salaries have increased. Late 1919 and the year 1920 brought increases to the greater proportion of them. A few were granted further increases in 1921. Like other professions where salaries have never been proportionate to training and experience, there is little danger of reduction with lower living costs. The average rise in salary at the last increase noted by the superintendents of nurses was between $300 and $400. Some had to satisfy themselves with an extra $5 a month; more fortunate ones secured for themselves an advance of $50 or $60 a month.

City, county and state hospitals seem to pay lesser

amounts to their superintendents of nurses than hospitals supported by private funds. Such a conclusion is indicated from the data on the comparatively small number of hospitals supported by public funds represented in this survey. Further investigation would be necessary to make such a statement conclusive, however. State hospitals connected with universities are apt to pay more than the usual teaching hospitals, figures show.

In comparison with the salaries of superintendents in the same hospitals, data on which were compiled and published by THE MODERN HOSPITAL in the October, 1921, issue, the salaries of superintendents of nurses do not advance proportionately with the size of the institutions. For example, in hospitals of less than 50 beds, the superintendent of nurses receives an average compensation of $737 less than the hospital superintendent. When, however, the 500 bed group is considered there is a difference of almost $5,000 in the yearly remuneration. Does it not seem that the responsibilities of the superintendent of nurses would advance in the same ratio as those of the hospital's chief executive?

Teachers' vs. Nurses' Salaries

The position of superintendent of nurses is not exactly analogous to that of any other woman executive. Perhaps the woman principal of a high school is the nearest to her for purposes of comparison. To become a high school principal requires long training, longer experience, and executive ability. Probably about the same number of women high school teachers become principals as graduate nurses become superintendents of nurses. Teachers, too, must meet the added and very real factor of competition for executive positions with the other sex. With only a limited number of annual reports of boards of education in cities and towns of varying size and geographical location on which to base an estimate, these figures may be subject to challenge, but salaries of women principals in public high schools seem to vary from $1,800 to $4,000. The middle western or southern town which pays the superintendent of nurses in its 40 bed hospital a salary of $1,483 for twelve months, with living quarters, food and laundry furnished, would probably pay its woman principal $1,950 for nine months' work. The eastern city which would pay $2,500 and living expenses to its superintendent of nurses would give its woman principal—when in rare instances her sex would be no stumbling block for the position—the sum of $4,000.

All things considered, there is slight difference in the salaries paid women executives in the professions of nursing and of teaching. The real obstacle to the nurse in putting executive positions in her field on a financial level commensurate with the requirements for their efficient conduct is more likely the general opinion of boards of trustees that the services of women are either worth less or may be obtained for less than those of men. The superintendent of nurses' salary problem, if she has a problem, is rather one in common with women in all professions.

DETAILED INFORMATION REGARDING SALARIES PAID SUPERINTENDENTS OF NURSING IN HOSPITALS HAVING LESS THAN 100 BEDS

Range of Bed Capacity of 112 Hospitals—20 to 97 Beds.

1 to 49 Beds

Seven hospitals, or 6¼ per cent, of 112 hospitals under consideration.

Average salary of superintendent of nurses.....$1,483
Minimum salary..... 1,200
Maximum salary..... 1,800
Salaries above the average..... 5
Salaries below the average..... 2

50 to 74 Beds

Forty-nine hospitals, or 43¾ per cent, of 112 hospitals under consideration.

Average salary of superintendent of nurses.....$1,434
Minimum salary..... 960
Maximum salary..... 2,400
Salaries above average.....24
Salaries below average.....25

75 to 99 Beds

Twenty-nine hospitals, or approximately 26 per cent, of 112 hospitals under consideration.

Average salary of superintendent of nurses.....$1,691
Minimum salary..... 900
Maximum salary..... 2,400
Salaries above average.....13
Salaries below average.....16

DETAILED INFORMATION REGARDING SALARIES PAID SUPERINTENDENTS OF NURSING IN HOSPITALS HAVING 100 BEDS OR MORE

Range of Bed Capacity of 116 Hospitals—100 to 2,700 Beds.

100 to 199 Beds

Forty-six hospitals, or approximately 40 per cent, of the 116 hospitals under consideration.

Average salary of superintendent of nurses.....$1,581
Minimum salary..... 300
Maximum salary..... 2,244
Salaries above average.....17
Salaries below average.....29

200 to 299 Beds

Thirty-three hospitals, or 28½ per cent, of the 116 hospitals under consideration.

Average salary of superintendent of nurses.....$2,020
Minimum salary..... 1,465
Maximum salary..... 2,500
Salaries above average.....16
Salaries below average.....17

300 to 399 Beds

Six hospitals, or slightly above 5 per cent, of 116 hospitals under consideration.

Average salary of superintendent of nurses.....$2,115
Minimum salary..... 1,440
Maximum salary..... 4,000
Salaries above average..... 1
Salaries below average..... 5

400 to 499 Beds

Eleven hospitals, or 9½ per cent, of 116 hospitals under consideration.

Average salary of superintendent of nurses.....$2,381
Minimum salary..... 1,500
Maximum salary..... 3,000
Salaries above average..... 6
Salaries below average..... 5

500 and Over Beds

Sixteen hospitals, or approximately 14 per cent, of 116 hospitals under consideration.

Average salary of superintendent of nurses.....$2,239
Minimum salary..... 1,768
Maximum salary..... 3,600
Salaries above average..... 9
Salaries below average..... 7

SALARIES OF SUPERINTENDENTS OF NURSES AND HEADS OF NURSES' TRAINING SCHOOLS OF HOSPITALS HAVING LESS THAN 100 BEDS

No. of Beds	Monetary Salary	Monetary Equivalent	No. of Beds	Monetary Salary	Monetary Equivalent
		1 to 49 Bed Group			
30	$1,500	$600	40	$1,320	$480
30	1,560	480	40	1,500	480
36	1,500	720	45	1,800	924
36	1,200	Not estimated			
		50 to 74 Bed Group			
50	$2,400	$ 600	60	$1,080	$ 500
50	1,500	540	60	1,320	...
50	1,200	780	60	1,020	...
50	1,200	360	60	1,680	480
50	1,020	480	60	1,800	480
50	1,320	600	62	1,200	260
50	1,560	1,200	65	1,200	Not estimated
50	1,620	900	65	1,320	480
50	1,200	540	65	1,200	365
50	1,200	600	68	1,500	480
50	1,200	780	70	960	250
52	1,080	...	70	1,800	Not estimated
53	2,000	780	70	1,600	600
54	1,800	400	70	1,200	360
56	1,200	400	70	1,200	540
57	1,800	600	70	1,200	600
60	1,800	720	72	1,080	400
60	1,200	600			

		75 to 99 Bed Group			
75	$1,500	$ 420	80	$1,800	$ 900
75	1,620	780	85	1,800	650
75	1,800	600	86	1,920	720
75	900	...	86	1,400	840
75	1,800	Not estimated	87	2,400	600
75	1,200	750	88	1,800	900
75	1,080	540	90	1,500	480
75	1,800	600	90	1,680	750
75	1,500	600	90	1,500	480
75	1,140	780	90	1,500	240

SALARIES OF SUPERINTENDENTS OF NURSES AND HEADS OF NURSES' TRAINING SCHOOLS OF HOSPITALS HAVING 100 OR MORE BEDS

No. of Beds	Monetary Salary	Monetary Equivalent	No. of Beds	Monetary Salary	Monetary Equivalent
		100 to 199 Bed Group			
100	$1,500	$ 720	142	$2,000	$ 600
100	1,200	Not estimated	145	2,100	480
100	1,200	600	150	1,500	600
100	1,200	480	150	1,500	440
125	2,400	720	150	1,140	600
100	1,200	Not estimated	150	1,800	900
100	1,500	600	150	1,800	1,200
100	1,320	360	160	1,500	1,000
100	1,500	600	150	1,980	720
101	1,500	600	150	1,620	730
104	1,500	540	150	1,600	2 rooms, bath.
110	1,500	1,000	150	2,100	360
115	1,320	660	150	1,500	400
117	1,500	720	150	1,200	600
120	300	180	150	1,500	700
120	1,200	624	155	1,920	750
125	1,430	673.75	160	1,800	B. R. and L.
126	1,560	540	160	1,300	416
126	1,800	600	160	2,000	750
126	1,380	480	170	1,800	480
137	1,800	750	174	1,800	420
140	1,500	1,000	175	1,800	550
140	1,500	480	180	1,500	B. R. and L.
140	2,244	1,122	180	1,332	(?)
142	1,800	2 rooms, board and laundry.	185	1,500	750
			192	1,800	400
		200 to 299 Bed Group			
200	$1,800	B. R. and L.	255	$3,000	Maintenance
200	1,465	$1,165	250	2,400	$ 900
200	1,600	1,000	260	2,100	600
200	2,100	1,000	250	1,800	750
200	1,200	365	256	2,400	1,000
200	2,100	480	260	1,800	600
200	1,800	600	265	1,800	900
200	1,500	675	267	2,400	600
200	1,500	Not estimated	270	2,100	1,500
210	2,310	50%	273	1,800	1,500
215	2,400	(?)	275	1,920	Full mainten'ce
225	2,175	(?)	275	1,200	1,000
225	2,500	550	285	2,400	Maintenance
236	2,600	1,500	289	2,500	750
240	1,800	R. and B.	291	2,000	B. R. and L.
250	1,600	B. R. and L.	295	2,500	Full mainten'ce
250	2,400	Maintenance			
		300 to 399 Bed Group			
300	$2,000	....	350	$1,500	$ 900
300	4,000	$360 meals only	360	1,440	1,000
320	2,000	B. R. and L.	360	1,750	600
		400 to 499 Bed Group			
400	$1,200	....	450	$2,000	....
404	2,000	$1,500	475	2,700	$ 500
446	2,000	400	476	2,700	Full rate
460	1,800	900	480	1,500	800
450	3,000	1,200	494	2,500	800
450	2,400	900			
		500 Beds and Over			
500	$2,000	$1,800	1,110	$2,310	$1,155
500	1,800	Full mainten'ce	1,209	2,310	800
625	2,400	1,000	1,202	1,768	860
700	1,800	600	1,600	2,824	1,500
770	1,800	....	1,800	1,500	B. R. and L.
850	2,400	500	1,837	2,310	....
850	2,400	900	1,900	2,600	1,800
900	2,100	780			

SALARIES OF SUPERINTENDENTS OF NURSES AND HEADS OF NURSES' TRAINING SCHOOLS WHO ALSO ACT AS SUPERINTENDENTS OF HOSPITALS

No. of Beds	Monetary Salary	Monetary Equivalent	No. of Beds	Monetary Salary	Monetary Equivalent
		50 to 74 Bed Group			
50	1,800	600	60	$1,500	$ 384
50	1,500	1,800	60	1,800	780
50	1,800	500	60	1,800	600
50	1,800	480	60	1,320	600
50	1,200	600	65	1,800	416
52	1,800	600	66	2,100	900
64	1,800	300	70	1,500	300
66	1,800	480			
		75 to 99 Bed Group			
76	$1,080	$ 360	82	$1,800	$ 500
75	2,400	780	85	2,000	960
75	1,500	365	87	2,100	...
80	1,500	720	90	1,800	720
80	1,600	Not estimated			
		100 to 199 Bed Group			
100	$1,600	$ 600	100	1,500	Full mainten'ce
116	2,400	900	145	2,100	2 rooms, bath
120	2,400	....	150	3,000	2 rooms, bath
160	2,000	Not estimated			

CALENDAR OF PIONEER NURSES

An artistic work is the successor to the Florence Nightingale calendar of 1921, dedicated to the "Early Leaders of American Nursing," and second of a series of nursing calendars to be presented by the National League of Nursing Education.

With each month's calendar for 1922 are a quaint reproduction and a brief biography of a famous American nurse, beginning with Sister Helen, who inaugurated the Florence Nightingale system of nursing into America in her work at Old Bellevue Hospital in New York, a sketch of which decorates the cover page. Pioneer nurses to whom the calendar is dedicated include Linda Richards, Alice Fisher, Lucy Lincoln Brown, Louise Darche, Diana Clifford Kimber, Anna Caroline Maxwell, Isabel Adams Hampton, Lavinia Lloyd Dock, Isabel McIsaac, Sophia F. Palmer and Jane Archer Delano.

In choosing the twelve representative nurses for the calendar its publishers submitted a list of suggested names to a number of nurses in all sections of the country representing various associations and branches of the work. The twelve receiving the highest number of votes were selected. The best available photographs were sought and friends and associates of the women selected were asked to contribute biographical sketches.

The publication committee was composed of Isabel M. Stewart, Florence M. Johnson, Ada M. Carr and R. Inde Albaugh.

CUBAN NURSE PASSES AWAY

Twenty-three years' service in Cuba was ended on January 22, when Miss Annie O'Brien, chief nurse of Las Animas Hospital in Havana, died after a prolonged illness. She was buried in Philadelphia, her former home.

Miss O'Brien began her work under the supervision of such eminent physicians and surgeons as General Gorgas, Drs. Ross, Lazaer, and Carroll and under the immediate direction of Drs. Mario Lebredo and Cartaya, directors of the hospital, all of whom were active in research on yellow fever and its extermination.

Born in Pennsylvania, Miss O'Brien entered Blockley Hospital for training and was graduated by that school in 1896. She became head nurse at the hospital at Lebanon, Pa., and while there, war with Spain was declared. She offered her services to the American government as a nurse and was sent to Santiago de Cuba. There she contracted yellow fever and became immune. Later she was transferred to Havana and became chief nurse at Las Animas Hospital for contagious diseases, where she served with marked intelligence and rare faithfulness, her co-workers declare. She was a life member of the Spanish-American War Nurses' order in the United States.

GIVES REST HOME TO NURSES

A Summer Vacation and Rest Home has been given to the Training School for Nurses of the Grace Hospital in Detroit by Mrs. Helen N. Joy of that city. The property is situated on Elba Island in the Detroit River and will accommodate from thirty to fifty nurses. The residence has just been remodeled and furnished by Mrs. Joy at considerable expense and will be used by nurses from the hospital on week ends and during summer vacation periods. Several acres of gardens and large fruit orchards are a part of the property. The hospital trustees have named the place the Helen N. Joy Rest Home for Nurses.

DIETETICS AND INSTITUTIONAL FOOD SERVICE

Conducted by LULU G. GRAVES,
Supervising Dietitian, Mt. Sinai Hospital, New York.

THE COLLEGIATE TRAINING OF DIETITIANS*

BY ABBY MARLATT, UNIVERSITY OF WISCONSIN, MADISON

THE report of the sub-committee on the collegiate training of dietitians is the result of studies of college two-year and four-year courses which definitely advertise the training work as part of their curriculum, and embodies suggestions taken from detailed answers to personal letters sent to dietitians at well known hospitals who have in the past received college graduates for periods of training from three to six months. These hospitals are from the Atlantic through to Minnesota. Data from the California field were taken from Dr. Agnes Fay Morgan's report made after a detailed study of the work of the hospitals in California.

The chairman had assistance from Dr. Ruth Wheeler, Mrs. Mary De Garmo Bryan, Dr. Katherine Blunt, Dr. Amy Daniels, Prof. Helen Parsons, and Prof. Mabel Little, all of whom have either assisted in courses for the training of dietitians or have helped in training dietitians in college and in hospital work.

The report for the two-year course is a slight modification from the one presented by Lenna Cooper's committee at the Institutional Economics meetings at the University of Wisconsin two years ago. This is included in this report, at the earnest solicitation of the president of the American Dietetic Association and Miss Cooper, both of whom feel that at this time we should continue to recommend a minimum two-year course to meet the needs of the group of smaller hospitals who are unable to pay the larger salaries that would necessarily be demanded where the training of the dietitian represents four years of college with additional apprenticeship as pupil dietitian in an accredited hospital.

Two-Year Students Are Limited

In the two-year course the outline indicates the best judgment of persons who have watched the training of the two-year group and have had experience in taking them as pupil dietitians. The need for courses in physics as well as in chemistry, biology and psychology was recognized by practically all of those who were consulted.

The one criticism that was made is that the amount of time given to food preparation is too limited, that the individual who goes from a two-year course to hospital training would necessarily have more to do with the buying and preparation of food than with the diet kitchen work, and therefore, a larger period of time should be given to perfecting the technique in cookery. The fact that cookery processes are carried on in connection with the courses in nutrition, and dietaries in diseases; and detailed study in the preparation of food in large quantities is given in the second year seemed to the chairman of the committee to have met this demand sufficiently. Technique would need to be perfected during the summer months either in the individual home or in some institution so that the routine work would become technically more nearly perfect, leaving the major time in the two years of training to the better grounding in the fundamentals of applied sciences, economics and art. Following the intern period as pupil dietitian, the graduate of a two-year course should be assigned as assistant dietitian in some hospital where the head dietitian has had the wider training. After successful work for one year, she may be sent out as the only dietitian in a smaller hospital.

Requirements in Four-Year Course

The suggested four-year course leading to the bachelor's degree is definitely divided into groups. In each group the sequence of studies is such as should occur in a well organized course. No attempt has been made to adjust to semester or year schedules, it being felt wise to leave that to the judgment of the home economics department in the institution offering the course, the emphasis being placed on the fact that the general education in the arts and sciences should be a prerequisite to the applied work in food, shelter, dietetics, and institutional management. With the student who has not had a wide background in general education and intensive courses in chemistry, physics, biology, it would be futile to do collegiate work in applying these sciences in the study of foods, sanitation, dietetics and applied economics.

Where the students are definitely planning to do research work in connection with physicians and other research workers in the hospital, it would be advisable to include such courses in clinical medicine, as the previous training of the student would prepare her to take. Under Group H, courses are suggested in clinical laboratory diagnosis, not that the dietitian would be called upon to do this type of work, but that the dietitian must know the vocabulary and the technique and be able to understand the findings in connection with the laboratory diagnosis, so that the cooperative work with the physicians may be more intelligently developed.

The need for courses in psychology, sociology, and education is recognized by the workers in hospital fields because the native ability to handle employes and work with

*Read at meeting of American Dietetic Association in Chicago, October 25, 1921.

patients is rare. The better knowledge of human psychology and principles of education should be an asset in developing the ability of the trained dietitian to handle her problems with tact and judgment.

It is hoped that the institutions throughout the country who are offering courses for the training of dietitians may eventually be able to give graduate work to experienced teachers who are desirous of entering the dietitian field.

It has been suggested that the year of graduate study could be divided into three periods, the first of approximately three months taken during the summer vacation and the other two periods to include the nine months of resident study. The second period, beginning in the fall, may include detailed study in hospitals or dispensaries and preliminary work in research in metabolism laboratories preparatory to the second semester, which may be given to a definite research problem selected by the student in consultation with the faculty of the department and the staff of the resident hospital.

The need for better trained dietitians in our hospitals and cooperative work between the dietitian service and the superintendent of nurses and the superintendent of the hospital is becoming increasingly apparent. If the dietitian is to be given recognition as having coordinate rank in a hospital staff she must be sufficiently trained in the sciences and in her own special field to be able to know what pieces of work she may successfully develop, what types of work are cooperative and what types of work she should not attempt.

There is a field for the nurse's work, a field for the medical officer's, and one for the dietitian. They should be sufficiently separated so that there is no possibility of misunderstanding, but they should be so coordinated that the patient receives the best possible assistance in the struggle back to health. The least training that the dietitian today should receive is the work done during four years of college training, one-third of the credits of which should have been along home economic lines. In addition she should have from at least four months to possibly twelve months of work beyond her bachelor's degree; this work to be taken, in part, as pupil dietitian. Later, after a wider experience as assistant and head dietitian, she may return to college work, developing research standards in cooperation with a medical college with its group of hospitals.

SUGGESTED FOUR-YEAR COURSE

Leading to B.S. Degree

GROUP A—Taken as part of a liberal education (should be ⅓ of total).
English—(6 semester hours required; others elective).
Composition and rhetoric (1 year), 6 credits.
Commercial correspondence, or
Sophomore composition (1 semester), 2 credits.
English literature (1 year), 6 credits.
Advanced courses comparative literature (1 semester), 2 credits.
Language—(8 to 16 semester hours in the college).
Latin in high school, 3-4 years should be taken to give foundation for medical courses.
Advanced courses in foreign language (reading knowledge should be the measure).
History—(3 semester hours required).
Better to take at least one year to secure knowledge of college methods in historic study—may be Ancient, Medieval, English, United States, Modern, European.
Art—(2 semester hours).
General courses in art appreciation.
Economics—(1 course required; others elective).
Psychology—(3 semester hours required; others elective).
General (1 semester), 3 credits.
Social (1 semester), 3 credits.
Experimental or educational (1 semester), 3 credits.
Sociology—(1 course on "The Family" at least).
Education—Courses suited to needs of student.
GROUP B—Science as foundation for advanced study (should be at least ⅓ of total).
Chemistry—(At least 18 hours).
General (19 credits).
Quantitative (3 credits).
Organic (aliphatic), (3 credits).
Food (4 credits).
Physiological (5 credits).
Physics—(1 year), 6 credits.
General and applied.
Biology—(1 year), 8 credits.
Bacteriology (4 semester hours).
General and applied—lecture and laboratory course.
Human physiology and hygiene (4 semester hours).
Lecture and laboratory course.
GROUP C—Food Study (Applied Science) (1-1½ years), 9 credits.
1. Selection and preparation of foods, including serving of meals. (1 semester), 3 credits—lecture and laboratory.
2. Food economics (applied economy)—(3 semester hours). Production, transportation, storage and preservation, markets, tests for quality, substitution values.
3. Experimental cookery (1 semester), 2 credits.

GROUP D—*Textile Study*—(1 semester), 3 credits.
Textile chemistry, laundry chemistry and laboratory practice.
GROUP E—Housing and Sanitation (1 year), 6 credits.
1. Architectural plans and details, plumbing, heating, lighting, sanitation, floor and wall finishes of hospitals, halls, cafeterias (1 semester), 4 credits.
2. Decoration (1 semester), 2 credits. Study of textiles, furniture, color design suited to institutional equipment.

GROUP F—Dietetics (1 year), 7 credits.
1. Nutrition and diet (4 semester hours).
Dietary standards, diet as influenced by age, sex and occupation; construction of dietaries and service of meals; detailed dietary study made on self. Group dietary made at practice cottage. Study of metabolic processes; urine, feces, blood analysis and respiration tests following dietary studies. Food requirements of young children; comparative study of milk and various proprietary infants' food and formula; principles underlying milk modification in infant feeding.
2. *Diet in disorders of nutrition* (3 semester hours).
Lecture, reading and laboratory course.
A study of intermediary metabolic processes, the adaptation of diet to the disorders of nutrition.
3. Organization of teaching courses (2 credits).

GROUP G—Institutional Administration, 14 credits.
1. Organization and administration of institutions.
Principles of industrial organization applied to purchasing food, equipment and supplies for an institution; accounting and office records; storeroom in management and inventories; studies of service problems in management of employes; institutional housekeeping; cafeteria organization and management.
2. Large quantity cooking.
Practice in preparing food for large groups; cost studies in changes in weight of food due to cooking; in determining size of portion; in number of portions per pound and in cost of servings. Limited to food majors. Lecture and laboratory.
3. Institutional dietaries and catering.
Marketing and menu planning for all kinds of institutions, economic use of foods, catering, community kitchens.
4. Institutional laundry management.
Purchase, care and use of laundry equipment, use of soaps, starches and bluing; organization of work in laundry; methods of laundrying various materials; methods of checking and accounting.
5. Tea room, restaurant and hotel management.
Study of location, amount of capital needed, necessary equipment, organization of staff and work, menus, cost accounting and advertising.
6. Institutional equipment.
Principles involved in construction of institutional equipment; care of equipment; types of equipment; newest equipment on market; planning of institutional kitchens; writing of specifications for equipment orders.

GROUP H—Clinical laboratory diagnosis (1 semester), 3 credits.
Study of metabolic processes with special reference to abnormal conditions. Analysis of normal and pathological urine, gastric contents, stools, blood, etc.

YEAR GRADUATE STUDY

1st period—Pupil dietitian in hospital, 3 months.
2nd period—Clinics in hospital or dispensary work in research and metabolism laboratory.
3rd period—Research problem under hospital and department management.

SUGGESTED TWO-YEAR COURSE

I. ENGLISH—(3 semester hours).
Written and spoken English; theme writing, special emphasis being placed on outlines, note taking, writing of clear, correct English. Also the writing of social, business and professional letters.

II. CHEMISTRY—(10 semester hours).
Inorganic chemistry (6 semester hours).
Properties, use and preparation of important metals, nonmetals and other compounds. Elementary discussion of chemical theory. The laboratory illustrates theoretical instructions, and lays foundation of laboratory technic. Principles of qualitative analysis introduced.
Organic and food chemistry (4 semester hours).
Aliphatic and aromatic series of carbon compounds with emphasis on such parts of organic chemistry as are most closely related to food chemistry. Chemistry of carbohydrates, fats, and proteins, including qualitative analysis of typical foods.

III. PHYSICS—(6 semester hours).
Principle of and application of
Mechanics
Heat, light } to household
Electricity

IV. BIOLOGY—(7 semester hours).
Bacteriology—(4 semester hours). Nature of bacteria, related to public health, spread and contraction of disease, food manufacture and decomposition. Laboratory and lecture course.
Human Physiology and Hygiene—(3 semester hours). Class, laboratory and demonstration on mammals.

V. PSYCHOLOGY—(3 semester hours).
General psychology and applied psychology with experimental work as basis for better understanding of employes.

VI. Economics—(3 semester hours).
General introductory course. Lectures and readings.

VII. Foods—(4 semester hours).
A study of foods and food composition, general principles of cookery, serving of foods. Laboratory work includes preparation of various classes of food, not only the fundamental foods but pastries, salads, entrees, and fancy desserts.

VIII. Food Marketing—(3 semester hours).
Food production, transportation, storage, marketing and markets, cooperative buying and selling, price fixing and price regulation, trade discounts, trade names, and field practice in buying.

IX. Nutrition and Dietakes—(4 semester hours).
Nutrition; chemistry and physiology of digestion, metabolism and its products; energy value of food; energy requirements of the body; nutritive properties and qualitative relations of protein, fats and carbohydrates and ash constituents; vitamines. Food requirements of individuals in health and through infancy, childhood, adolescence, adult life and old age, menus for the different periods of life.

X. Diet in Disease—(3 semester hours).
A study of pathological conditions in various diseases and dietetic requirements to aid in their cure. Dietaries computed in grams and total calories and variations in menus planned for diabetic, nephritic, tubercular, gastro intestinal, anemic, febrile and gouty cases.

XI. House Architecture—(3 semester hours).
Study and drawing to scale of typical floor plans and elevation of hospitals, cafeterias, lunch rooms, dormitories. Study of materials and treatment as to sanitary finishes, color schemes; kinds and installation of plumbing, heating and lighting fixtures. Estimation of cost.

XII. Institutional Housekeeping and Laundry—(3 semester hours).
Details of the care and cleaning of floors, walls, equipment, machinery, and detailed processes of laundry work. Selection and cost of institutional furnishings; handling and repair of household linen.

XIII. Institution Equipment—(2 semester hours).
Principles involved in construction of institutional equipment; care of equipment, types of equipment, newest equipment on market; planning of institutional kitchens; writing of specifications for equipment orders.

XIV. Large Quantity Cookery—(4 semester hours).
Preparation of foods in large quantities; studies of cost, loss in weight, determination of size of proportion, cost of each serving, selling of each serving; menus for lunch rooms, cafeterias, tea rooms, dormitories, hospitals, and other types of institutions; economics and social feature of above menus.

XV. Administration, Organization and Accounting—(3 semester hours).
Types of institutions and systems of administration; labor problems; personnel; line of authority; labor turn-over; characteristics of employees of the different nationalities; management of help; duties of maids and janitors; other routine work of an institution household; the relation of a dietitian to an institution—her duties.
Simple methods of accounting; factors entering into retail costs of food consumed; overhead; per capita costs.
Pupil Dietitian—Following the two-year course the pupil should spend four months in an approved hospital or other type of institutional organization before being placed in charge of institutional work.

THE TEACHING OF DIETETICS TO STUDENT NURSES

EVIDENCE is constantly being shown of the lack of proper training for dietitians. Since the dietitian is deficient in many phases of her work, it naturally follows that the nurse's training in dietetics must also suffer.

The American Dietetic Association is making an effort to secure better courses of training in colleges as well as in the hospital. Committees have been making a study of the situation and have made recommendations as submitted in the following reports. Another committee considering the training of student dietitians reported at the annual meeting of the American Dietetic Association.

The department would be glad to know of hospitals and colleges adopting these courses and of results obtained. In the dietary department at Mount Sinai, the principal points in the following course for nurses are incorporated though not in the order indicated.

The preliminary course is given early in the nurse's training and the advanced work in the senior year.

Nurses Weak in Dietetics

Dietetics has always been one of the most important subjects in the nursing school curriculum, but with the recent strides in nutrition and in the dietetic treatment of disease, it must necessarily take a much larger place in the preparation of the student nurse. Without a thorough, up-to-date course in dietetics, nurses nowadays find themselves seriously handicapped in public health work and in other branches of nursing.

Reports from nursing schools throughout the country and the results of state examinations for a number of years have shown that dietetics is one of our weakest subjects. There are many reasons for this, among them lack of sufficient time, adequate equipment, good textbooks and trained teachers. But the main reason is that few of us seem to have given the subject the careful thought and study it demands. We have been content to go on with the same old cookery outline and the same teaching methods with which we started years ago, forgetting that the whole subject has been growing rapidly and that the emphasis has changed greatly in the past few years, both in subject matter and in method.

Dietitians as well as nurses are responsible for whatever failure there has been to galvanize this vital subject into life. The American Dietetic Association has shown its interest by appointing a sub-committee of its Committee on Education to cooperate with the Education Committee of the League of Nursing Education in working out a more satisfactory outline for the teaching of dietetics to nurses. The report which follows is only a preliminary study, to be supplemented later by a fuller outline of typical classes or lessons now being worked out by the members of the Dietetic Association; also lists of illustrative material, text and reference books, etc., for the use of both teachers and students.

The committee invites suggestions and criticisms from all those interested in the better teaching of this subject. The members of the sub-committee are: Lenna Cooper, Battle Creek Sanitarium, Battle Creek, Mich.; Charlotte Addison, Post-Graduate Hospital, New York; Isabel M. Stewart, Department of Nursing and Health, Teachers College, New York (chairman Education Committee of the National League of Nursing Education); chairman, Katherine A. Fisher, Department of Household Administration, Teachers College, New York.

OUTLINE OF COURSE OF STUDY

Preliminary Course

Time.
This course should be given during the preliminary period of training. A minimum of sixty hours of lecture and laboratory work is recommended; laboratory periods should be at least two hours in length.

Instructor.
The class should be conducted by a dietitian who is a graduate in household science from a recognized school.

Preparation of class.
It is assumed that the students are of high school grade. Exemption from the course should be granted to those students considered by the superintendent of nurses and the dietitian to have had the equivalent of the work given. An examination should determine such exemption, and all students should be required to take any work directly relating to cookery for the sick which was not included in their previous training.

Laboratory equipment.
A laboratory is essential, with facilities for individual laboratory work. Not more than sixteen students can be handled satisfactorily by one teacher in one laboratory section. Illustrative material, such as charts, slides and exhibits should be supplied and freely used.

Aims of course.
1. To give students a sound fundamental understanding of the principles and methods of cookery for well and sick people.
2. To make them familiar with the nutritive values of food and with the essentials of well balanced daily meals for well people and convalescents under varying conditions.
3. To help the students to appreciate thoroughly the economic aspects of food, such as selection, relative costs and control of waste.
4. To give a training in high standards of cleanliness and sanitation in the care, preparation and service of food.

5. To give practice in the planning of well balanced, attractive and suitable menus, and a training in the efficient preparation of these.
6. To demonstrate and maintain dainty and artistic service of food.

Methods of teaching.

1. Some instructors may wish to separate the lectures from the laboratory periods. If this scheme is followed, it is thought that fifteen one-hour lecture periods should be planned within the minimum time recommended above. The most satisfactory method, however, is the combination of lecture and demonstration by the instructor, followed by laboratory practice, investigation and discussion by the students. The students have thus a chance to directly connect, under supervision, the general principles with their methods in laboratory practice.
2. Instructors should remember that their students are nurses in training and not students specializing in home economics. Only that material, therefore, which the nurse will use during her training and in her professional work later, should find a place in the course, and it should, of course, be presented with a view to constantly holding her active interest. "Fancy cookery," as such, has no place in this course. Dainty and effective garnishes should be taught and interesting variations from the typical dishes considered, but dishes involving such time and elaborate arrangement of ingredients should be excluded.
3. The introductory lessons should bring the students into immediate touch with the actual work of food preparation instead of being entirely devoted to the less interesting phases of laboratory practice, such as a study of equipment and fuels, and it is not desirable to devote the greated part of these first lessons to the theoretical side of the subject. The students should think in terms of the daily food service to patients on all kinds of diet, and it is considered wise to base as many of the lessons as possible on the preparation of an entire meal and the setting up of trays. This plan gives the students practice in applying their knowledge of food values to the planning of the day's diets and the instructor an opportunity to call to the attention of the class concrete examples in diet and the problems to be met in planning attractive, palatable and well balanced menus. Problems representing suitable meals for persons under specific conditions, such as meals for children of different ages, for adolescents, for adults and the aged, should be worked out by the class instead of asking them to consider isolated masses of facts concerning food values and food preparation. Methods of cooking should be studied as they are first used and later a summary and comparison made of the various methods, as to their effect on the flavor and digestibility of food.
4. In conducting classes the instructor should lay the emphasis on the reason for following the various methods, on "why" as well as on "how" and "what." This will keep live questions constantly before the students, making them stronger in technique, more resoureeful, and capable of thinkinz independently in this field. In all review work questions given to the class should reflect this more desirable method of teaching, and it is of the greatest importance that the actual needs of the nurse in her later professional work should be given the closest attention.
5. Standard or basic recipes should be used freely and the students instructed in varying these as necessary. This should give them a knowledge of general principles and of proportions in food combinations and eliminate the memorizing of recipes, a practice which cannot be condemned too strongly. For example, using as a basis the standard recipe for cream sauce, a cheese sauce for macaroni may be made and the various cream soups prepared. General principles of cooking the various typical groups of food should be stressed in the laboratory work.
6. Students should be trained in the critical judgment of the finished dishes and of the meals prepared and served. There should be constant comparison of class results by the instructor and students and for this they may work out score cards. For example, a *baked custard* may be scored on this basis:

	Possible Score	Actual Score
Appearance	1	
Consistency	2	
Texture	4	
Flavor	3	
Service	3	
Immaculate service	1	
Artistic arrangement	1	
Convenience for patient	1	
Menu	7	
Suitability to patient's condition	2	
Combination of foods	2	
Palatability and digestibility of food	3	

7. Class notes should not be voluminous. They may be conveniently arranged on cards, indexed for reference purposes, and should be carefully corrected by instructor. A good textbook and suitable reference books relieve students from much note taking, but at present there appears to be few suitable books of this kind for student nurses. Some are, for the most part, a collection of recipes, while others pay too much attention to specific methods and specific information, with inadequate attention to general principles. The material presented is not always well adapted to the average general educational preparation of the class and to their vocational needs.
8. The attention of students should be frequently drawn to the various ways in which this work is related to nursing education and opportunities for applying this part of their training as students in the hospital and later in their professional work. The growing tendency, in medicine and nursing, to pay more attention to the dietetic treatment of disease should receive full consideration.
9. The social and economic aspects of the food problem should also be kept before the class. Many of these nurses will be working later with poorer families and will be expected to advise them about the choice and the relative costs of standard foods.
10. The instructor should keep closely in touch with the other preliminary courses most directly related to the work in dietetics, so that she may know how to correlate her work with these to the very best advantage. Instructors should also keep in touch with the latest developments in nutritional work and familiarize the students with the various sources through which they may keep their knowledge up to date.
11. The principles of physical science should be woven into the course in a popular way, to give the reasons for certain procedures in cookery which other courses in the preliminary work do not cover.
12. The content of a course in dietetics for nurses has already received much thought, but the methods of teaching have not been given adequate attention. Students are therefor not always well prepared to use this training to the best advantage.

Content of course

(These subjects are not arranged in the sequence in which they would be presented in a course of study, nor are they divided into lessons. Such an outline will be submitted later, following the suggestions discussed above.)

1. Review of the physiology of digestion, absorption, assimilation and excretion.
2. Classification of foods and food products under typical food groups according to their place in the diet and to their economic value, as for example:
   - A. *Milk*—Important as a source of energy, protein, lime, and vitamines, unique as sufficient in growth-promoting food. Study of grades of milk.
   - B. *Cereals and cereal foods*—Economical source of protein, but not well balanced in salts and vitamines; typical starchy foods.
   - C. *Vegetables and fruits*—Varying greatly as sources of energy, but rich in vitamines.
   - D. Typical *protein foods* and food products:
     1. Meat, fish and poultry—generally popular, but expensive as sources of protein and fat. Poor in lime and in vitamines.
     2. Eggs—rich in protein, salts and vitamines; value in the dietary depends much on market conditions.
     3. Cheese—valuable as a meat substitute in concentrated form.
     4. Nuts—rich in protein and fat; valuable as a meat substitute.
3. Food values and their measurement; practice in computing food values.
4. Composition and food value of the different foods; specific functions of
   (1) Proteins (4) Salts
   (2) Fats (5) Vitamines
   (3) Carbohydrates (6) Water
5. Factors in food requirements such as age, climate, activity, size, etc.; consideration of suitable diets for persons under these varying conditions.
6. Preparation of foods:
   - A. Selection, cooking and serving of typical protein and carbohydrate foods and of the fats and oils:
     1. *Fruits and vegetables*—Dried and fresh, greens and legumes.
     2. *Cereals and cereol foods*—Including gruels, breakfast cereals, macaroni and rice. Comparison of ready to serve and home cooked cereals as to cost and food value.
     3. *Eggs, milk and milk products*—Including sterilization and pasteurization of milk.
     4. *Fish*—Baked, boiled and broiled fish; shell fish.
     5. *Meat and poultry*—Broiled chops and steaks, squabs and chicken; broths and beef juice.
     6. *Fats and oils*—Their use in cookery; commercial preparations.
   - B. Preparation of the typical food combinations:
     1. *Beverages*—Including alhumenized drinks, and milk and egg drinks.
     2. *Thickened liquids*—The use of the prepared starches, especially cornstarch and flour, in making cream soups, purees, sauces and desserts; basic recipes for these dishes with practice in varying them as to thickness, flavor and ingredients; method of using eggs with the starches in thickening liquids.
     3. *Flour mixtures*—Study of lightening agents; basic recipes for biscuits, muffins and plain cake, with methods for simple variations; sponge cake.
     4. *Salads*—Illustrating the serving of different foods and suitable combinations of these; salad dressings.
     5. *Gelatine dishes*—Basic recipes for the plain jellies, sponges and creams, with the simple varintions.
     6. *Frozen dishes*—Types and their varintions; freezing small quantities.
7. Food sanitation handling and care of food, especially of milk; care of kitchen utensils and equipment; brief study of the sanitary aspects of commercial food distribution and preservatinn.
8. Methods of cooking—their effect upon the digestibility and flavor of fond.
9. Use and abuse of condiments.
10. Hospital diets—use of liquid, light and full diet, with general procedure in feeding the sick.

Practical work in the diet kitchen.

1. It is coming to be generally recognized that the diet kitchen is a laboratory where the student nurse may apply her technical knowledge and where she may develop a fair degree of skill in preparing food for the sick. The student is there to be taught and must not be thought of simply as a means of getting the work done.
2. The duties of student nurses in the diet kitchen should not involve any needless repetition, and their services should not be used for the routine of dishwashing and other cleaning, or for much preparatory work, such as paring vegetables, washing greens, etc. Maids should be employed for this purpose.
3. Students should have some of their diet kitchen experience during their preparatory course or soon after, so that they may apply at once the elementary principles and procedures outlined above. This period should be for at least three or four weeks,* the time of each student being carefully organized so that she may have practice in the preparation of all typical dishes included in above outline. This should prepare her to assist in the preparation and serving of the simpler ward diets.

*Preparatory students are usually on practical duty not more than three to four hours daily. If the students are on eight-hour duty, the total period in the diet kitchen should be shortened accordingly.

4. Later, when she has had more opportunity to study different types of disease and to care for more complicated cases, she will take up the preparation of special diets and formulae for infant feedings as outlined in the more advanced course below.

DIETOTHERAPY
Course of Study

Time

A minimum of 20 hours is recommended, or 30 hours if infant feeding is included.

It is thought advisable that this course should be given as soon as possible after the preliminary training and, if arrangements can be made to have the students receive this instruction during the time they are taking their training in medical nursing, they will be able to use their knowledge to the best advantage.

Instructors.

The dietitian should be a graduate of a recognized school, fully qualified to meet the requirements of special hospital dietary work. The medical phases of the subject may be given by a physician who is a specialist in this field.

Aims of course.

1. To apply the principles of cookery and of nutrition to the dietetic treatment of nutritional disorders.
2. To teach the students how to fill doctors' dietary prescriptions and to make attractive menus and palatable meals from these.
3. To teach the students how patients may be led to understand the purpose of their dietetic treatment in order that they may cooperate more fully with the physician and nurse.
4. To study the charting of diets on history sheets.

Methods of teaching.

As the student nurse will have an opportunity for practice in preparation of diets in the diet kitchen, it is thought that less than half the time devoted to this course should be given to laboratory practice. As each type of diet is being considered, trays, demonstrating suitable menus, should be prepared and used as a basis for lectures and for discussions by the students.

Content of course.

1. Principles in the dietetic treatment of disease, with special reference to diseases of metabolism, and other conditions requiring special diets.
2. A study of the various types of diets as they are used in treating various diseases, using each as a basis for planning attractive menus and preparing palatable meals for patients:
   (a) Starch free diet.
   (b) Fat low diet.
   (c) Protein low diet.
   (d) Purin free diet.
   (e) Salt free diet.
   (f) Diet with restricted or forced fluids.
   (g) High caloric diet.
   (h) Diets with roughage.
   (i) Diets as free from roughage as possible.
   (j) Various combinations of above diets.
3. Practice in filling dietary prescriptions, computing caloric values of special diets when necessary, and charting.
4. Infant feeding—modified milk and doctors' formulae—technique of milk room, such as care of feeding bottles, use of Babcock tester, etc.

Practical work in wards and diet kitchen.

1. When the student nurse is experienced enough to be assigned to the position of chief diet nurse in the medical or surgical wards, it is desirable that her time should be divided, if possible, between the wards and diet kitchen, in order that she may study the patients' individual needs, prepare under supervision the diets for the special cases, and follow closely the effects which are produced by the treatment.
2. In the same way, her service in the milk room should, if at all possible, be a part of her service in the children's wards, so that she may know the condition of the babies and watch from day to day the results of the formulae they are getting.
3. As an instructor of nurses, the dietitian or her assistants should, through visits to the wards, keep closely in touch with the diet work of the student nurses there. In the larger hospitals, where the dietitian has charge of the administration of the dietary work throughout the entire hospital, she should, of course, have adequate assistance for the supervision of the work of the diet kitchen and for the training of student nurses. Here also the pupil dietitians should get their training in supervising special diet work.

Post-graduate work.

Special problems of food and nutrition in public health work and in institutional administration should be considered as post-graduate study. The social service dietitian is best qualified to give instruction in the former, and the administrative dietitian in the latter. Nurses who wish to specialize in metabolic work should also plan to take post-graduate training.

THE DIETITIAN IN THE HOME

The future of the consultant dietitian in the home is a promising one and should have a place in the medical world, says Miss Blanche M. Joseph, field dietitian of the Michael Reese dispensary in Chicago, in a recent article in *Hospital Social Service*. A food prescription filled in the kitchen laboratory, she says, will some day hold as an important place with the physician as the prescription filled by the pharmacist. As in other professions, the dietitian should be paid for her services according to visits. The amount can only be determined by the experience and background she possesses.

A visiting dietitian must go into the home, Miss Joseph declares, with the spirit of imparting to the patient the necessity of keeping the exact diet as prescribed, to prepare the food according to formula given, to aid the patient, or whoever is responsible, in preparing the food and to show them how to calculate the caloric value.

A SIMPLE METHOD FOR WASHING BRAN*

By FLORENCE H. SMITH, B.S., and W. D. SANSUM, M.D.

THE standard equipment of an electric mixing machine may be used for the washing of bran. Washed bran is used very extensively in the various bread substitutes for diabetic patients. The usual method of washing bran in cheesecloth bags under running water is a slow process and often fails to free the bran from starch even after many hours of monotonous work. There are a number of commercial products on the market but, due to the difficulties of production, these are expensive.

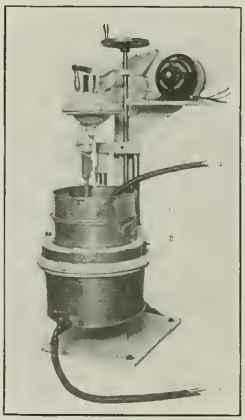


Fig. 1. Electric mixing machine (Read) with the necessary parts assembled for the washing of bran. A. Water inlet. B. Brush beater. C. Puree sieve bowl with six-inch extension. D. Thirty-quart ring. E. Water bath. F. Sixty-quart ring. G. Water outlet.

After unsuccessful attempts with various types of clothes washing machines it became evident that friction in the presence of a supply of running water was necessary to remove the starch from bran. The brush beater and puree sieve on an electric mixing machine in the presence of running water eventually proved very satisfactory. A Read machine was used in this instance, but other types are adaptable.

The various standard parts are assembled as shown in Fig. 1. The water inlet connects with a faucet. The puree sieve mesh is twelve to the inch. The regular faucet of the water bath is replaced by one large enough to accommodate a one and one-half inch hose. Fig. 2 represents the brush beater. The sieve bowl is filled with bran. The water is turned on and the bran thoroughly wet before the machine is started. Ten minutes' work on the machine at medium speed is usually sufficient to free the bran from starch. The bran is tested for starch with Lugol's solution. A sample of the bran is boiled with water in a test tube and a few drops of Lugol's solution added. The presence of starch in very small traces gives a blue or blue black coloration. When the bran is starch-free by this test it is placed in strong sacks and sent to the hospital laundry, where it is dried in the tumbler. Bran prepared in this way keeps indefinitely and has a very fine, fresh odor.

Fig. 2—Brush beater.

*From the Potter Metabolic Clinic of the Santa Barbara Cottage Hospital, Santa Barbara, Cal.

HOSPITAL EQUIPMENT AND OPERATION

With Special Reference to Laundry, Kitchen and Housekeeping Problems

Conducted by FRANK E. CHAPMAN, Director
Mt. Sinai Hospital, Cleveland, Ohio

LIGHTING THE HOSPITAL

BY REGINALD TRAUTSCHOLD, M.E., THE SOCIETY FOR ELECTRICAL DEVELOPMENT, INC., NEW YORK CITY

PROBLEMS OF ILLUMINATION

Has the artificial illumination of your hospital been carefully worked out by mathematical calculation or is it simply an ill-considered adaptation of the lighting systems in use in the majority of public buildings? The illumination of a hospital brings many exacting requirements and presents problems peculiar unto itself. Each separate department demands individual consideration. Local lighting for individual beds, for instance, furnishes a dual problem in obtaining the best type of illumination for the patient's reading and in answering the doctor's or nurse's requirements for attending him. An expert on lighting problems gives, in the accompanying comprehensive article, some scientific facts on lighting the hospital which are worthy of your study and application.

IN SPITE of the apparent complexity of hospital lighting, due to the many exacting and distinctive requirements for certain specific departmental needs, the modern hospital building presents unusually favorable conditions for the installation of efficient and highly effective lighting systems. The lighting of the various departments necessitates individual consideration, it is true, but present day illumination knowledge makes it a multiplicity of problems, which individually are not difficult of solution, rather than any very complicated one. Each problem entails the four recognized steps in the design of any general lighting system: First, decision as to the foot-candle illumination required; second, selection of the type of lighting unit best adapted to the location and for the purpose intended; third, determination of the location of outlets, the mounting heights and number of lighting units required; and fourth, calculation of the size of lamp which will provide the foot-candle illumination desired—and the procedure in the case of the more general departments is now pretty well standardized.

For example, in the wards, which are relatively large rooms for the accommodation of a number of patients at the same time, a threefold problem is presented with ordinarily very favorable conditions for meeting all requirements with simple, effective and economical installations. First, a general illumination has to be provided which will be ample for the performance of all regular routine duties by nurses and doctors and for visitors to the wards to move about freely. A well diffused system of general illumination is needed. Second, local lights should be provided at the head of each bed so as to enable the patients to read without eye strain, which may also be used at night when the doctors or nurses require a relatively high degree of illumination to care for the patient. Third, a system of night lights is necessary to allow nurses to find their way about and exercise the necessary supervision after the general ward illumination has been extinguished for the night.

The general overhead lighting system should provide a very uniform illumination of well diffused light and at the bed level, which may be taken as two and one-half feet above the floor, an intensity of two or three foot-candles should be attained. The acceptance of an illumination standard of say two and one-half foot-candles at the bed level establishes a satisfactory and definite basis for planning the general lighting system. The next step is to decide upon the type of lighting unit. As diffused illumination is essential, as all possible direct glare and reflected glare must be avoided and as a high quality in respect to shadows, making them soft and luminous is necessary, the choice of lighting unit is pretty definitely limited to those of the totally and semi-indirect lighting type, with the preference favoring the former.

With indirect lighting, the proper location of outlets is determined by the mounting height of the lighting units and it is upon this one step in laying out the general overhead lighting system that the success or failure of the whole installation in no small measure depends. With the bed level taken as two and a half feet above the floor, the mounting height of the lights—i.e., the distance to the top edge of the lighting unit reflector—should be equal to three-quarters the distance between the bed level and the ceiling plus the bed level elevation. That is, the drop of the reflector should equal one-fourth the distance between the ceiling and bed level. With the mounting height thus established, the spacing of outlets in rows and the distance between rows of outlets can be made once and a half the distance between the bed level and ceiling with the assurance that the light emitted by the lamps in an indirect lighting unit so installed will be very uniformly distributed over the area illuminated. The distance between outer rows of outlets and side walls should be made not more than one-half the spacing distance and preferably about one-third.

A well lighted reception room.

To illustrate perhaps more plainly the proper location of ceiling outlets, the requirements for a hospital ward sixty feet long and forty feet wide with a ceiling height of twelve and a half feet may be taken as an example. The bed level being two and a half feet, the proper mounting height of the units would be seven and a half feet above the bed level, ten feet above the floor, or the reflector drop two and a half feet. The permissible spacing distance between outlets would then be ten and three-quarter feet and the distance between outer rows of outlets and side walls not more than five feet and preferably nearer three feet. Consequently, three rows of five outlets each would be required, with the distance between outer rows and the side walls of three and seven-eighth feet and between the end outlets of the various rows and the end walls of three and one-eighth feet.

Must Exercise Care in Location

If for any reason the proper mounting height proved unsuitable, necessitating an increase in height—decreasing the reflector drop— the outlets must be brought closer together and more of them installed in order to secure a uniform illumination; the decrease in spacing being about proportional to the decrease in reflector drop. On the other hand, any greater reflector drop will produce a less satisfactory distribution of the light which is difficult, if not impossible, to overcome.

With the outlets located and the mounting height of the lighting units established, the type of lighting unit having been selected, a wide range in intensity of very uniform and satisfactory lighting can be obtained by simply installing the necessary size of lamps. This desirable flexibility of illumination is dependent, however, upon the correct location of the outlet and satisfactory mounting height of lighting units, so it is quite imperative that care be exercised in the location of the lights if proper illumination is to be secured. If this has been done—it is of necessity a preliminary undertaking—the selection of the proper size of lamp to supply any desired degree of illumination is a matter susceptible of mathematical determination.

The area in square feet served (illuminated) per outlet should first be calculated and then the necessary lumen output required per square foot of area for providing the desired intensity of illumination. This latter measure is simply the product of the measure of illumination in foot-candles multiplied by the ratio of a suitable depreciation factor divided by the coefficient of utilization, but this ratio is quite a complex one, being influenced by a number of factors which, though determinable, necessitate considerable familiarity with illumination problems for their proper valuation.

How to Estimate Depreciation

The depreciation factor is an allowance made for depreciation due to aging of lamps, accumulation of dirt and dust and the deterioration of the reflecting value of the lamp walls and under the conditions usually to be found in a well conducted hospital may be taken as 1.30. The valuation of the other influencing factor, the coefficient of utilization, however, is a much more complicated matter and can only be arrived at accurately when there is a full knowledge of existing conditions and when reliable statistical data pertaining to the science of illumination is available. It is a measure of that proportion of the light generated which reaches the place under consideration—the bed level, in this case. It is influenced by the type of lighting unit employed, the proportions of the room, mounting height of the lighting units and the color and reflecting value of the walls and ceiling. Even in the well appointed hospital wards, it may vary between such wide limits as from 0.10 to 0.50, so any method of approximating the coefficient of light utilization or the lumen output required for securing a certain desired intensity of general illumination is risky.

As it is quite out of the question to publish all the necessary statistical tables required for calculating the coefficient of utilization for any hospital wards, the approved procedure is best demonstrated by the consideration of some specific and typical example. For instance, the computations involved for wards similar to those referred to in discussing the location of ceiling outlets—one sixty feet long and forty feet wide with a ceiling height of twelve and a half feet and a mounting height for indirect lighting units of ten feet, the ceiling outlets on ten and three-quarter foot centers—will serve for the purpose of illustration.

It may be assumed, also, that the indirect lighting units employed are of the enameled type with bowl-shaped suspended reflectors, that the ceiling is smooth and light and the walls hard surfaced and fairly light in color. Under such conditions, which should be quite typical of well appointed hospital wards, the coefficient of light utilization would be 0.37 in a room of the dimensions

Special lighting fixture for operating table.

specified, with the light sources seven and a half feet above the bed level. Taking the depreciation factor as 1.30 and the desired intensity of illumination on the level of the beds as two and a half foot-candles, the lamp lumens required per square foot of floor area would be between eight and nine (2.5x1.30/0.37). As each of the fifteen outlets provided would have to serve some 160 square feet of floor area, the lamp lumens required per outlet would be probably between 1,200 and 1,400. Three fifty-watt lamps per lighting unit would give a gross lumen output of some 1,440 which, allowing for a certain unavoidable interference of light, due to three light sources being in close proximity, would probably be about right. A more economical installation would be, however, the use of a single 100-watt gas filled lamp for each lighting unit. Such a lamp has a lumen output of 1,260 and consumes only two-thirds the electrical energy needed for the three fifty-watt lamp cluster.

The local lighting for the individual beds should be furnished from wall brackets over each bed or between the beds located at some convenient height—say five feet, or so, above the floor level—and quite obviously considerable latitude exists as to proper size of lamp, the chief requirement being to furnish sufficient illumination for the patient's comfort and convenience. As the illumination standard for the patient's reading requirements is apt to be very different from that desired by the doctor or nurse attending the patient, a form of wall bracket with two receptacles should be employed for these local lighting units. The upper receptacle may contain the lamp for the patient's requirements, which should be furnished with an opalescent reflector for concealing the source of light and directing the light on the bed. The second, or lower, receptacle may then serve for the accommodation of a special lamp, portables, heating appliances or such electrically operated instruments as may be required.

The provision of proper night lighting, though of necessity quite subdued, should be just as carefully planned as the provision of the general illumination for the evening hours. There are three quite customary ways of providing the night illumination, which will be satisfactory, as a rule, if of about one-tenth the intensity of the general illumination—first, by low wattage lamps installed in the indirect lighting units furnished the general illumination, but wired on an independent circuit; second, by lamps placed in the floor within suitable reflectors covered by heavy clear glass which direct the light to the ceiling from which it is diffused downward; and third, by louvers lighting units of low wattage set in the baseboard between beds which cast a beam of light along and onto the floor between the beds.

Operating room lighted by twelve seventy-five-watt bowl enameled daylight lamps.

Ward illuminated by indirect lighting units.

The plan of installing low wattage lamps in the indirect ceiling lighting units is probably the most economical in first cost and is the one most usually adopted. The lamps for night lighting should emit only about one-tenth as much light as those employed for furnishing the general illumination, or, as is perhaps more general practice, an allowance of one-tenth watt per square foot of area served by each outlet may be made. The lumen output per outlet required for night lighting of wards similar in dimen-

illumination to those which were used to illustrate the sions and location of indirect lighting units for general selection of proper size of lamps would be about 120 or slightly more. The lumen output of a fifteen-watt lamp is 125, so this is the size of lamp which would prove most satisfactory for the purpose. As the light from each outlet would have to serve some 160 square feet of floor area, about the same size of lamp for night lighting would be indicated by the more approximate method allowing one-tenth watt per square foot of area served.

If floor lighting units directing the light to the ceiling are employed for night lighting the location of the units should conform as nearly as possible to the location of the ceiling outlets—that is, in number and spacing—in which case about the same size of lamps should be employed as in the case of the night lights in the indirect lighting units serving for general illumination.

Extra lighting units are needed for the nurse's desk and chart rack and these should be well shaded so as to avoid annoying the patients by their brilliancy. A portable desk lamp equipped with a reflector throwing the light down on the records or work serves admirably in one case, while for the chart rack a wall bracket light fitted with a reflector directing the illumination onto the racks proves quite satisfactory. The medicine closet, also, should be provided with a suitable light.

Utility rooms for the care of apparatus and the dressing rooms which are frequently located near the wards should be well lighted, preferably by a ceiling light—one lighting unit usually being sufficient, as the rooms are small—with local lighting units over the sinks, sterilizing apparatus and utility desks. In such rooms, as well as throughout the hospital, base-board and wall receptacles should be provided in adequate numbers, for they are in-

valuable for the accommodation of the numerous electrical appliances found of such great convenience in the hospital.

The proper lighting of private rooms presents much the same problem as found in a well-appointed bedroom complicated by the need of additional hospital facilities. A well diffused general illumination from an overhead lighting unit should be provided, controlled by a wall switch near the entrance to the room. Indirect lighting very similar to that recommended for the general wards proves most satisfactory if the ceilings of private rooms are suitable for efficient light reflection, or semi-indirect lighting may be employed. If indirect methods of lighting are not practical for any reason, overhead direct lighting units must, of course, be installed, but in such case they must be provided with suitable diffusing media.

The intensity of illumination need not be quite as high as that advisable for the general wards, but, as in the case of home lighting, no very definite standards can be advanced. The chief requisite is the attainment of a well diffused general illumination—not too bright, but sufficient for all ordinary requirements. Supplementing this general illumination, there should be light from wall brackets or table lamps near the bed and extra outlets should be provided for the attachment of additional lamps and special appliances, just as in the case of the general wards.

The illumination of the corridors and passageways throughout the hospital proper—that is, between wards, operating rooms, laboratories and other working rooms —need not be quite as high as that of the general illumination in the wards, as sufficient light to permit of easy passage will suffice. This calls for an illumination of from one to one and a half foot-candles, against two or two and a half. Overhead lighting, either of the indirect or direct variety, should be provided, and, as such passageways are relatively narrow a single row of centrally located lighting units will serve. The spacing of the units depends upon the mounting height of the lights, which should be quite high to assure plenty of clearance for passage and the avoidance of possible glare, but it may be made somewhat greater than in more spacious rooms. In fact, in the ordinary corridor the spacing of lights may be made equal or even somewhat in excess of twice the mounting height of the units and still secure a reasonably uniform illumination. the relatively close hard surfaced, smooth and usually light walls serving to reflect and diffuse the light up and down the corridor. With this one modification of permissible increase in spacing distance of lights, the determination of lamp sizes and other commutations entailed in the planning of the corridor lighting system are similar to those followed for lighting systems in the general wards.

General and supplementary lighting in the hospital.

The proper lighting of operating rooms, naturally of first importance in any hospital, entails the utilization of the full knowledge of the illumination expert and cannot well be discussed constructively in general terms. However, the problem is not beyond the limits of definite, logical solution. The first consideration is a determination of the intensity of illumination required, just as should be the case in planning the lighting system for any installation. A high intensity of illumination is essential—thirty to fifty foot-candles, or even more being desirable —for lighting the operating table and this must be well diffused and of the proper color to enable the surgeon to distinguish between veins, arteries, bile ducts, healthy and diseased tissue and the many anatomical details the skilled operator must recognize instantly.

This all calls for the most careful planning in the natural daylight illumination of the operating room, so the proper artificial illumination of such rooms calls for the most approved and effective methods known to the illuminating expert. For daylight operations, well diffused north light is recognized as essential, and consequently, the proper artificially lighted operating room should approximate to the utmost the illumination requirements demanded for correct natural illumination. Difficult as such a problem is, it is a definite problem susceptible to a satisfactory solution if the various influencing factors are rightly valued and combined.

The quality of north light must be matched in color and in diffusion, the light properly directed and a suitable intensity of illumination secured. These are the chief essentials. Unmodified light from the modern incandescent lamp contains somewhat excessive color rays from one end of the daylight spectrum and is lacking in color rays from the other end. To overcome this difficulty correction is made by causing the emitted light to pass through colored glass bulbs, daylight lamps, or through suitable color screens. In this way, a very close match to north light is secured, but at a certain sacrifice in lamp efficiency. That is, daylight lamps and screened lamps have a lower coefficient of utilization than do clear bulb lamps of the same wattage, necessitating the employment of more powerful lamps.

Diffusing glassware and suitable reflectors are needed to secure the necessary diffusion of light, but as the mounting height of the lamps is comparatively low—usually about ten feet above the floor level—diffusion is materially improved by the employment of a number of light sources throwing the light in different directions. An excellent arrangement is to mount the lamps, fitted with suitable angle type prismatic reflectors, at an elevation of about ten feet and in the form of an open frame, usually rectangular four feet by eight feet), with the lamps spaced about two feet. The lamp reflectors in such arrangement should be trained so as to direct the light on the operating table. With light already fairly well diffused by the use of bowl-enameled lamps or by passage through diffusing glassware, thus coming from a dozen different directions and focussed upon the operating table, the resulting illumination is thoroughly diffused, objectionable shadows eliminated and there is no trouble from either direct or reflected glare. With a lighting fitting such as described and of the dimensions given, the use of seventy-five-watt bowl enameled daylight lamps in the twelve prismatic reflectors will give light intensities of from forty to fifty foot-candles on the horizontal plane

of the operating table, twenty to thirty foot-candles on forty-five degree planes and from ten to twenty foot-candles on vertical surfaces above the table—intensities almost ideal for the most delicate and complicated operations.

If the operating room is a small one devoted exclusively to the surgeon's use, the proportion of light transmitted by the prismatic reflectors will usually suffice for the general illumination around the sides of the room, making unnecessary the provision of supplementary illumination, but if the operating room is also an auditorium for holding clinics with demonstrations, additional illumination is essential. In such cases, the general lighting of the large room can be satisfactorily accomplished by the installation patterned somewhat along the lines suggested for lighting the general wards during evening hours.

Hospital laboratories present another problem in lighting which can be discussed in only the most general terms, on account of the great variety of uses for which they may be intended.

However, the same general rules for planning effective lighting systems apply and knowing the conditions and requirements the problem is no more complicated than that found in the wards. The first essential is simply to know the intensity of illumination desired for the general illumination, knowing which, the supplementary lighting can be planned without difficulty. As laboratory work customarily entails experiments necessitating the careful observance of evaporation, filtration, titration and similar processes, good general lighting is quite necessary, as well as adequate local lighting of benches, etc. The general illumination, sufficient also for lighting refrigerating and sterilizing apparatus, drying ovens and other hospital equipment, is advisably one of an average intensity of ten foot-candles at the bench level. Local lighting intensities naturally vary, but being supplied by supplementary lighting equipment can be readily adjusted to meet requirements. The chief essential is the provision of plenty of convenient outlets, a provision which should be made as well throughout the hospital. These outlets are all important, for if the general lighting of the various rooms is properly provided, supplementary and extra illumination is a very simple matter if convenient outlets are available for plugging in portables and special fittings.

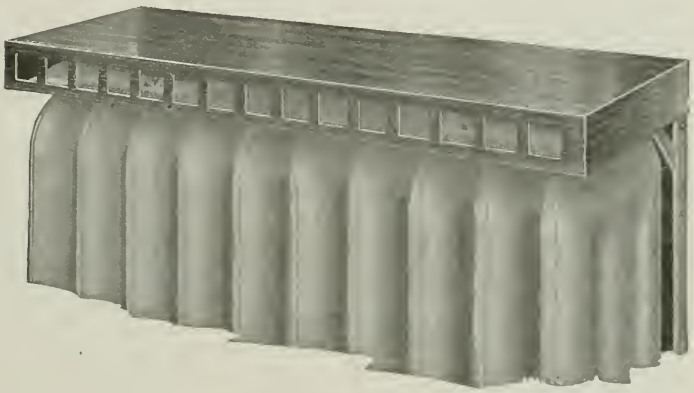
The lighting of the lobby and reception rooms, which should never be overlooked, despite the greater importance of having the working room properly illuminated, should be soft, restful and pleasing. All possibility of glare should be eliminated, necessitating the thorough diffusion of light and the location of light sources, so far as possible, outside normal lines of vision. This is usually best secured from overhead illumination and the same general rules for installation planning govern as in the hospital proper, with the addition that more attention and importance may be placed upon decorative and artistic features of fixtures. An illumination of from four to six foot-candles at a table plane will prove both cheery and restful. Desks should then be provided with supplementary illumination and a few floor lamps or portables will add a homelike touch.

That most valuable of our modern institutions—the hospital— should be provided with all possible comforts and conveniences, as well as being equipped to render service most effectively, and probably there is no better and effective manner of realizing this than through adequate and proper illumination.

A NEW STEEL RADIATOR COVER

Although many types of radiator covers and shelves have been devised, most of them have been expensive and complicated or else lacking in the necessary durability. Recently there has been introduced an all-steel radiator cover, which is not only reasonably priced but seems to meet all necessary requirements. Furthermore it is endorsed by heating engineers.

Hospital superintendents have long noticed that curtains and walls directly above radiators are easily soiled. This is because particles of dirt and dust are carried in the air circulating through the radiators, and some of them deposit themselves on the walls and hangings. The new radiator cover overcomes this trouble by means of a back shield and deflecting plate, which assist rather than hinder the circulation of warm air. Furthermore, the cover transforms the ordinarily unsightly radiator into a convenient shelf, table or window seat.



The radiator cover is made throughout of furniture steel with a two-inch flange on all four sides, the front flange being open so as to assist radiation. The corners are electrically and acetylene welded so in reality the cover is one solid piece of steel. Naturally the covers are not furnished in stock sizes, but are built to fit any type and size of floor or wall radiator. They are finished to match the furniture or wood trim of the room, while the frame, back shelf and deflecting plate are finished to match the radiator.

The Service Bureau on Hospital Social Work, directed by Miss Ida M. Cannon, has compiled a new and complete directory of the social service departments in the hospitals of the United States and Canada. This directory will be printed and issued as a regular bulletin of the American Hospital Association to institutional members. It is probable that additional copies will be printed and made available to non-members at a nominal price, it is announced.

SURGICAL INSTRUMENTS OF TODAY

By MAX THOREK, M.D., Surgeon-in-Chief, American Hospital, Chicago

THAT surgical instruments offered the profession today often fail to give the satisfaction which should reasonably be expected of them is a fact well known to almost every surgeon. When we consider that the well being of the patient, and often his life, are jeopardized by the inferiority of instruments, it seems not unreasonable to require of manufacturers a responsibility equal to that of the surgeon who is held morally, often legally, responsible for his patient. One should feel secure to accomplish safely any contemplated surgical procedure. The surgeon of whom so much is demanded is wholly dependent upon the instrument makers for those mechanical appliances and devices which render possible the accomplishment of his purpose as an operator.

Manufacturers who offer surgeons' instruments to be used in conditions where life and future usefulness are at stake should have a conscience not hardened by commercialism. Certainly they are morally responsible with the surgeon if by reason of the failure of their appliances success is not attained. Moreover, there is a certain amount of confidence lacking in the surgeon unless he has a feeling of perfect confidence in his instruments. An accident occurring in the midst of a serious operation is not only embarrassing to the operator but may so affect him as to render him almost unfit to continue the gravely responsible task before him.

In recent years, surgical instruments have not infrequently grown higher in price and, inversely, inferior in quality. For a time the World War took the blame for altered commercial conditions, because of the great demand of the government for vast supplies, inability to produce the materials needed, etc. There is now no reasonable excuse for such a condition except that some manufacturers have grown so calloused, so commercialized, that conscience in the matter has entirely given place to greed for profit. Our domestic resources certainly can supply every material necessary in the manufacture of this class of goods; the different processes through which metals are put to render them fit for use can and should be done in this country. Painstaking craftsmen in the art of instrument making can be secured even more easily now than ever before.

The author has had reason in the past several months to grow almost vehement in his denunciation of certain manufacturers. A few of these experiences, which are of so grave concern to the patient and even more than embarrassing to the surgeon, will be mentioned along with a few explanatory remarks on the accompanying photographic illustrations.

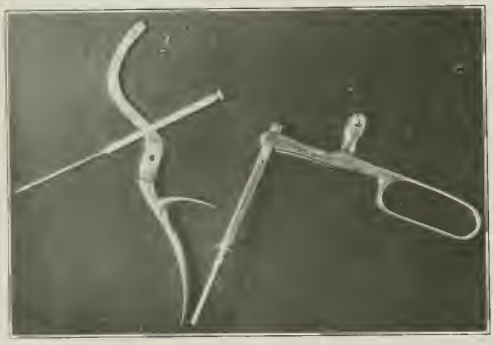


Fig. 1.

In Fig. 1 is shown a tonsil snare that has in many cases proved a delusion as well as a snare. Among its fellows it appears mechanically perfect. Threaded properly, one picks it up with a feeling of confidence that is lost the moment that any force is brought to bear upon it. Either it frequently refuses to produce the desired tension on the loop or the entire instrument on occasion falls down completely, leaving the operator grasping an assortment of parts—and the patient and his friends wondering if their judgment in choice of surgeon has been in error. This particular instrument has repeatedly duplicated this performance to my certain knowledge, but has now been retired from service.

In Fig. 2 (A, B and C) are shown three trephines that were broken in a single operation. In this case the skull was of ordinary density and there was no apparent reason for the failure of these instruments to prove trustworthy. In A (at the left) is shown a trephine that had not seen previous service. It was quite new. Note the turning of the edge, and imagine the surgeon's relief that the old and tested instrument (B) was at hand to depend upon in such an emergency. Unfounded faith and shattered hopes! The "trustworthy" old instrument suffered a broken "bit" and was discarded. Again, another trephine was brought into service and after a few strokes it went out of commission from a broken guard. Only because a fourth instrument was available was it possible to proceed with the operation, and then under an intense mental strain lest another accident might occur.

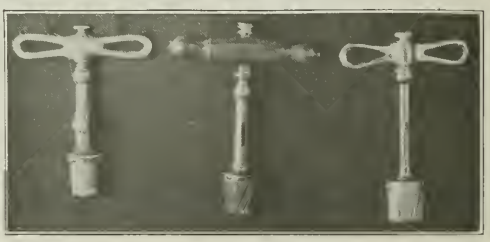


Fig. 2.

Figs. 3, 4 and 5 illustrate a miscellaneous assortment of broken needles, forceps, scalpels, mallet, etc. It is hardly necessary to comment on them other than collectively. They represent what occurs almost daily in the experience of every operator.

In Fig. 6 is shown a roentgenogram of a patient who underwent operation for hypertrophied turbinates. The surgeon in question used a pair of special turbinectomy scissors for the operation. During the course of this procedure the scissors broke. An attempt to remove them followed and failed. A rapidly developing ascending meningitis ensued which caused the death of the patient. There is a question, of course, that had the scissors not broken the patient might have been alive.

Is it not time that we as a profession remonstrated and demanded of manufacturers co-accountability in fur-

nishing us dependable "tools" with which to undertake our grave responsibilities?

IN DEFENSE OF SURGICAL INSTRUMENTS

Dr. Thorek's frank criticism of surgical instruments and their present quality was submitted by THE MODERN HOSPITAL *to one of the leading manufacturers and dealers in surgical instruments in this country, whose comments may be of interest.—Editor.*

"In many respects I agree fully with Dr. Thorek," writes the member of one of the outstanding surgical instrument manufacturing firms in the United States, "but I believe the publication of such an article without further explanation would be misleading to the surgeon and an injustice to the instrument maker who is really making every effort to improve the quality of instruments.

"Dr. Thorek is quite right in his statement that many instruments of inferior grade are being sold. So are poor goods of every description, and while, as Dr. Thorek indicates, the purchase of surgical instruments is a matter of great importance, unfortunately few hospital superintendents or surgeons ever question the *quality*, and buying is done wholly on a *price* basis. Only too frequently are instruments bought at a 'bargain' and from individuals who have no established business but who buy job lots of rejected material which should never be allowed to reach the hands of the surgeon. Who could expect to have reliable instruments which are given away as a premium

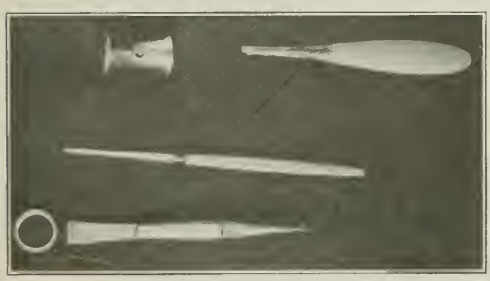


Fig. 3.

with a cross of catgut? Yet this is being done today and many buyers compliment themselves on their 'find.'

"Many instruments of the best quality are ruined by careless handling. Who could expect a delicate pair of forceps to remain in good order when they are dropped on a tile floor, used as needle holders, for clamping rubber tubing, or most anything except for what they are intended? And who hasn't seen a perfectly good pair of surgical scissors used for cutting a piece of steel snare or silver ligature wire?

"The mallet illustrated might have been used for driving spikes, but because it broke, the instrument maker is blamed. Of course I know Dr. Thorek would not do any of these things, but there are many persons around a hospital who make use of tools, and when it comes to variety, surgical instruments offer a wonderful assortment.

"In handling repairs one can well judge what happens. Instruments are received by us broken and bent almost beyond recognition. Much of this damage is done in careless handling in sterilization. Such articles as are commonly known as 'jointed,' forceps, scissors, rongeurs, etc., are seldom properly cleaned, dried and oiled after

Fig. 4.

operation. The result is an accumulation of rust in concealed parts, and broken screws, loose joints and other weakened parts are the result. For some reason the right care of instruments is a subject which is given little attention by many surgical nurses.

"The illustrations submitted are interesting indeed. Fig. 1 shows a tonsil snare, one which is used probably as much as any tonsil snare on the market. Until recently, when the patent on this particular instrument expired, all this make of snares sold were made by one individual and this man is considered second to none in the making of fine instruments. The chances are that it either was not assembled properly, or repaired by someone who did not know his business.

"Fig. 2 shows some trephines. If a trephine, which must necessarily be thin, is bent sidewise, as this picture shows, one of two things is going to happen: either the metal will split and bend, as this one did, or it will break completely.

"The hæmostats in Figs. 3, 4 and 5 are marked "Japan" and were no doubt purchased during the time when better instruments were not available, but if bought from some responsible house, that house will no doubt replace them. This is equally true of suture needles. The best needles have always come from England, but owing to an embargo on surgical needles during and for a time after the war, none were imported. Many were sold which were of domestic make, both to the Medical Department of the Army and for lay use. It was impossible to produce needles equal to those of English make, as they bent

Fig. 5.

Fig. 6.

easily and many were poorly constructed otherwise. Unfortunately, this industry did not develop further and today all surgical needles come from Europe.

"Dr. Thorek's statement that skilled instrument makers are plentiful is an error. There is a smaller number available now than ever, owing to the fact that the surgical instrument industry in this country is not one which attracts mechanics, who must spend some years in apprenticeship.

"Those instruments which we manufacture are of necessity few in variety as compared with the total required. Were it possible to export, we could then manufacture in large enough quantities of each pattern so that greater use of machinery could be made, but at present-day costs few surgeons could pay the necessary price for surgical instruments made by hand, at a cost many times that of an imported article of equal merit."

A PRACTICAL VENTILATING SYSTEM FOR HOSPITALS

Hospital authorities have become greatly interested in a new device now being marketed, and which offers a simple, yet very practical solution of hospital ventilating problems. The device, which is offered in a number of different forms, consists of an adjustable all-metal ventilator which can be used for windows, transoms or door panels. The ventilator is made in a wide range of sizes and finishes so that it is suitable for almost any requirements.

These ventilator sashes give ample fresh air. They can be adjusted against draughts, yet when desired they may be readily replaced by the customary glass sashes.

The ventilator proper consists of a steel frame containing adjustable louvers which can be completely closed or opened to any degree by means of an adjustable knurl or button in the side of the frame. The louvers are made with flanges which interlock when the ventilating section is closed. This makes the construction absolutely airtight. This unit can be fitted into any window by means of adjustable caps at either end.

When intended as a window ventilator there is added a wire screen which prevents flies, bugs or other insects from entering. Frequently these ventilators are furnished with wood frames, particularly for transom and window use. The frames are finished with at least three coats of weather resisting paints, which match the finish on the ventilating section. The weatherproof construction of the ventilators permits of their continuous use and yet allows plenty of fresh outdoor air to enter the room at all times.

To complete the process of ventilation, however, an additional system of small adjustable ventilators are suggested for use either in the door transom or in the door panels themselves. Such a system gives a thorough circulation of air through the room or wards, absolutely protecting against draughts and thoroughly adjustable.

For hospital purposes the use of the door ventilators is particularly desirable. When these ventilators are in use the unsightly half length screen frequently used may be discarded. Ample ventilation is secured, yet the privacy of the room is protected against the casual passerby. When the door or transom ventilator is closed, sounds are almost completely excluded.

The use of this device, however, is not limited to mere ventilator sections. Entire windows are constructed in accordance with the same principle and these windows may be mounted and counterbalanced so as to be raised and lowered like an ordinary window. When thus used, the sashes are also frequently supplied with wire screening, thus combining the features of a window screen as well. The use of such windows in hospitals is at once apparent as with a device of this kind any variation of light and air, as well as protection from the elements, is easily obtained. Both the upper and lower sashes are of the usual shape and may be mounted in conjunction with the ordinary glass window; or they can be used to replace one or both of them.

The manufacturer now supplies a complete window unit for buildings. This consists of the exterior screen, two glass window sashes and two ventilating

The ventilating transom in the upper panels of these doors solves a vexing problem of hospital ventilation.

sashes, all mounted in a special frame with customary weights so that any combination desired may be secured. This unit is so designed that either the window or the ventilator sashes may be dropped below the level of the window sill into a pocket. When the sashes are all in the sill pockets, a suitable cover closes the pocket to keep out dust and moisture.

With this construction it is possible to have any number of combinations. With both the glass and ventilator sashes lowered the entire window space is opened, or if greater privacy is desired, the ventilator sashes are raised in place, permitting free ingress of air but greatly reducing the light.

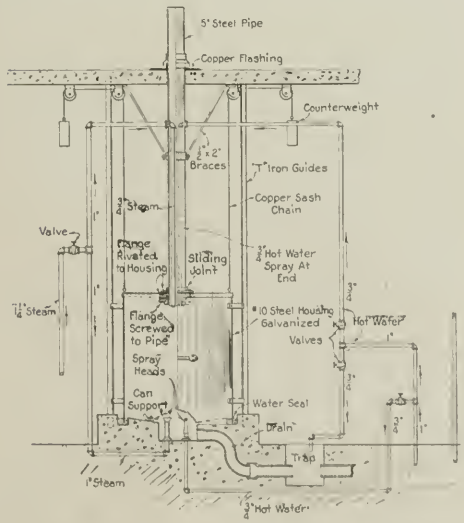
The fact that the louvers or slats in the ventilator sashes are completely adjustable enables this device to be used either as a ventilator or a shutter or both.

In the construction of sleeping porches or solariums, the separate window units can be joined edge to edge so as to make a continuous wall composed entirely of windows.

The value of this device for hospital construction is readily apparent. It offers a quickly transformable window which will admit sunlight and air in the exact degree desired, being equally adaptable for either winter or summer use.

GARBAGE CAN STERILIZER

Among devices that help to maintain the high standard of sanitation at the Edward Hines, Jr., Hospital at Broadview, Cook County, Ill., is a cleverly designed garbage can sterilizer. This device was originated by the plumbing contractor and suggests utilization of similar apparatus in other hospitals. The method of sterilization, as originally planned, is working out satisfactorily at the government hospital, it is understood.



Courtesy, Domestic Engineering.

The detailed drawing shown herewith explains the method of sterilization employed. Cans are placed upside down on the supporting rack, the outer cover pulled down over them, and steam and hot water sprayed from both top and bottom, so as to thoroughly clean the cans. All of the apparatus shown is in a fixed position except the bell-shaped cover that slides upon the stationary five-inch vent column, which also serves to house the upper steam and water pipes. A drain, four inches in size, serves the apparatus and discharges through a trap, as is shown, to the sanitary sewer.

The Edward Hines, Jr., Hospital is probably better known as the Speedway Hospital, which was recently opened by the United States Public Health Service.

TO CHANGE A. H. A. ELECTION PROCEDURE

Trustees of the American Hospital Association have appointed a committee to develop a new election policy which will be put into effect at the 1922 convention in Atlantic City. Criticism has been made, it is said, that association elections in the past were not sufficiently dignified and deliberative. With the appointment of the nominating committee a full year in advance, as was done at the last meeting, the trustees believe such objections will be overcome. Changes contemplated include the report of the nominating committee early in the week, other nominations from the floor, issuance of blank official ballots as each active member or voting delegate registers, and voting by written ballot.

Miss E. M. Geraghty, secretary of the American Dietetic Association, formerly of Champaign, Ill., is now at Lakeside Hospital, Cleveland.

MEETINGS, CONVENTIONS AND CONFERENCES

METHODIST HOSPITAL WORKERS DISCUSS MUTUAL PROBLEMS IN FOURTH ANNUAL CONFERENCE

REPRESENTATIVES of sixty hospitals, homes for the aged, and orphans' homes of the Methodist Episcopal Church of America were present at the fourth annual conference of the Methodist Hospitals and Homes Association held in Chicago on February 15-16. Association officials consider the convention, because of its profitable papers and discussions, the most successful in the brief history of the organization.

E. S. Gilmore, superintendent of Wesley Memorial Hospital in Chicago, was re-elected president of the association at the business session which concluded the two-day program. S. W. Robinson, superintendent of the Methodist Home for Children of Buffalo, N. Y., was named first vice-president; J. A. Diekmann, superintendent of Bethesda Hospital of Cincinnati, second vice-president; Miss Blanche M. Fuller, superintendent of Nebraska Methodist Hospital of Omaha, third vice-president and chairman of the nurses' training committee; the Rev. W. H. Underwood, superintendent of the Crowell Memorial Home of Blair, Nebr., fourth vice-president and chairman of the committee on homes for the aged and children; Mrs. W. A. Phillips, superintendent of the Methodist Home for the Aged of Chicago, treasurer; W. H. Jordan, superintendent of Asbury Hospital of Minneapolis, was re-elected secretary.

Highlights in the 1922 program were Mr. Gilmore's instructive paper on "Personal Relations of Hospitals to Patients"; the address of Dr. Willard C. Stoner, director of medicine at St. Luke's Hospital at Cleveland, on "The Hospital Problem in Relation to Modern Medicine"; and a half-hour's instruction in publicity methods by Dr. Ralph W. Keeler, director of publicity for the Methodist Church, with headquarters at the Methodist Book Concern in Chicago.

Nurses' Helpers Form Storm Center

Dr. C. S. Woods' paper on nursing problems, and Rev. C. M. McConnell's talk on rural health, were provocative of the most lively discussion of the convention. Dr. Woods' advocacy of the nurses' helper brought forth a storm of opposition, and the Rev. Mr. McConnell's picture of deplorable medical service in country communities did not pass unchallenged.

In his address on personal relationships between hospitals and patients, Mr. Gilmore, speaking at the closing afternoon session, said in part:

"The properly managed hospital will see that an entering patient gets immediate attention. He will be made welcome, and impressed with the fact that his interests are to be uppermost in the thoughts of everyone in the hospital, that his welfare is to be the hospital's first consideration. The necessary office record and financial arrangements should be made promptly and as pleasantly as possible. He should then be escorted to his room, preferably by a nurse. The head nurse of the floor should make it her duty to call upon him immediately to answer any questions he may wish to ask and to see that his room is in proper condition. An intern should wait upon him at the earliest possible moment, that the patient may know his physical condition is under early consideration. A hospital should be provided with a recreation or living room where patients may go and converse with one another to get away from their beds and forget their troubles temporarily. Hospitals in large cities or hospitals located where restaurant facilities are not convenient can well afford to have a small dining room for the use of the friends of patients who may be present during meal hours. This dining room probably will not pay expenses except in an indirect way. No one can compute the value to a hospital of the good will of the patients and their friends. Anything which will make for the increasing of this good will should be adopted.

"The attitude of the interns, nurses, and employes in the hospital will determine in very large measure the reputation of the hospital. People who are sick physically are usually sick mentally. They may be more grouchy, more unreasonable, and more demanding than when well, or they may be more susceptible to sympathy, more desirous of winning the esteem of those about them. In the former case the hospital must disarm suspicion, must overcome prejudice, must win the patient in spite of himself. In the latter case the hospital has an opportunity for doing good that is rarely equaled in any other walk in life. It should be the constant desire of everyone in the hospital so to conduct himself that when the patient leaves he will gladly say it was good to be there. The hospital management should always keep this in mind and both by example and precept impress everyone in the hospital with the thought that each patient is the guest of the individual nurse, intern, or employe. If each person in the hospital fully realizes that he is the host to the patient and that he should treat the patient as he would a guest in his own home, the hospital has gone a long way towards making the patient happy and increasing its own popularity.

"No hospital management has a right, however, to ex-

pect that his condition will exist automatically in the minds and hearts of the hospital personnel. It is the business of the management to implant it by seeing that the conditions in the hospital are such as to make the helpers part of the institution and desirous of doing all they possibly can do to assist the patients. This means the best possible accommodation for nurses, interns and help. The time once was that the nurses were domiciled in some nearby dwelling house that had been converted into a nurses' home by the simple expedient of setting aside the parlor as a reception room and then crowding the nurses into every other room in the house, including the kitchen and pantry. Employes were usually housed in the cellar and attic of the hospital, generally called basement and top floor to salve the conscience. The interns were crowded into just as few rooms as possible and were generally impressed with the idea that they were not physicians and men but incorrigible boys, who could always be expected to do the wrong thing at the right time. All these people, interns, nurses, and employes, are entitled to the best living conditions the hospital can afford. You may be sure the patients will receive exactly the same kind of treatment that the hospitals give to those who care for the patients."

Says State Medicine Threatens

Dr. Willard C. Stoner of St. Luke's Hospital in Cleveland brought the viewpoint of the medical man before the convention.

"If we are to prevent state medicine, where medical men become mere hirelings and the standard of practice becomes consequently lowered, there must be greater cooperation between hospital boards of trustees and the medical staff," declared Dr. Stoner.

"The hospital must sell medicine. It must realize on medical practice. There must be some basis of equity. The day is almost done when one group in the hospital shall have handsome incomes and other departments show a deficit. The medical man must be careful lest the legislature step in and in an attempt to remedy such conditions make him the employe of the state."

According to Dr. Stoner, the hospital should be a complete workshop where not only scientific treatment is given but where all cases difficult of diagnosis can go at a cost which is not prohibitive and where all worthy practitioners of medicine may take their cases for diagnosis and for suggestions as to proper therapy.

Cooperative Clinics Compete with Doctor

Many cooperative clinics, Dr. Stoner declared in his address, are competing with the whole profession by taking cases not only for diagnosis but for treatment. This practice, he says, will tend to lower the standard of medicine since it will take from the worthy man in general practice his best clientage and will not afford him hospital facilites.

"Hospital practice is the greatest incentive to do good work. Standardization of hospital practice, such as is being done by the American College of Surgeons, is tending to elevate the standard of medicine generally. Fads, quackery and sectarianism will thrive less when the public generally is educated as to the value and limitations of modern medicine. The facts of modern medicine rationally applied will bring a proper respect for medicine, greatly alleviate human suffering, prevent disease and eliminate a great waste. The hospital must ever be the important means of making these facts accessible to the public.

"The establishment of hospital facilities in rural communities must be the rational solution of medical practice in these districts. The investment in the modern training of medicine is too great to make rural practice inviting today. Better conditions must be the solution. Good roads and our present means of transportation make the establishment of hospitals in the larger town in rural communities practical. It will be less and less necessary for the acutely ill to be taken to the larger centers for diagnosis and treatment, which is often at the expense of the well being of the patient."

Conducts Class in Publicity Methods

Tips for hospital executives in publishing their annual reports were given by Dr. Ralph Welles Keeler in an informal and amusing address, lightened and made specific by classic examples from the reports of the very hospitals represented at the convention. His remarks had chiefly to do with the psychology of type and illustration.

Warnings against the interment of hospital needs in agate among broad columns of uninteresting data, against columns of meaningless figures, against imperfectly focused, inverted and distasteful halftones were sounded by the publicity head of the church. Concrete facts, he declared, should make up the annual report, such as the information, printed and pictorial, that the hospital has during the year consumed 220 Texas steers, has in a week filled with sheets a clothes line seven miles long and similar facts.

Mr. L. O. Jones struck the same note in his address on "The American White Cross" at a previous session. The American White Cross is a Methodist organization for providing for the sick and homeless; funds for the work are gathered through annual membership campaigns, similar to those of the American Red Cross. It is now organized in thirty-eight Methodist conferences and is supplying large sums for the support of hospitals and homes.

"Hospitals have not produced much attractive publicity," said Mr. Jones on speaking of the value of advertising publicity in the White Cross movement. "It has been too cheap, cheap paper, cheap printing, cheap effect. The hospital must learn to make a bid for support in the right way. Copy must be carefully prepared, it must touch a responsive chord in its readers and it must be presented in a form attractive to the eye."

Rural Conditions Call for Heroism

Problems of rural health were touched upon in a lively address by the Rev. C. M. McConnell, representative of the Methodist Board of Home Missions. The city with its slums produces healthier children than the country, he asserted, quoting statistics gathered during a four-year period in New York state which showed that eighty-seven per cent of the rural school children as compared with seventy per cent of the city school pupils had health defects.

"Improvement of human health and welfare is a problem of national significance," declared the Rev. Mr. McConnell. "It is a moral problem and heroic steps must be taken to meet it. In twenty counties of New York state, all rural, the number of doctors decreased twelve per cent from 1911 to 1920. Ninety-seven per cent of the doctors in these districts have been in practice for more than twenty-five years. Ninety per cent of rural people have never seen the interior of a hospital.

"The church should train medical missionaries to go out into the country and build up the health of the people. Graduates of medical colleges should be persuaded to undertake such service. It takes as much heroism to practice medicine in a country community as to fight for sanitation and better health measures in Korea. Local out-

posts for emergency treatment should be established in rural centers."

That the traveling clinic might solve the problem of rural health was suggested in the open discussion which followed. President E. S. Gilmore suggested that the home missionary board of the church might be interested in the problem of rural medical workers as the foreign mission board supplies workers for the foreign field.

Urges Employment of Nurses' Helpers

A plea for nurses' helpers was voiced by Dr. C. S. Woods, superintendent of the Methodist Episcopal Hospital at Indianapolis, in his discussion of "A Phase of the Nursing Problem."

The student nurse, in his opinion, should not be required to do commonplace tasks which must be repeated ad infinitum. To require a student to make beds hundreds of times and to carry thousands of trays is not his idea of good teaching. If a school child were asked to repeat the multiplication table every day during an entire school year, Dr. Woods argues, it would follow that he was either a dunce or his teacher was crazy.

"Women who are ambitious and sufficiently prepared to essay the curriculum of good nursing schools will not give a large amount of time and energy to a daily round of ordinary and even menial tasks," Dr. Woods declared in his address. "They seek an education. It is not an exaggeration to say that they are getting it in only a few institutions."

Dr. Dickmann, superintendent of Bethesda Hospital at Cincinnati, took issue with Dr. Woods on the subject of nurses' helpers.

"Where will you get them?" he challenged. "You can hardly obtain maids for the kitchen. These nurses' maids must be women of fine qualities of the same timber as student nurses. Where will you find them?"

Dr. Stoner and others thought the danger of their competition with graduate nurses would be real. Matrons of homes declared they believe it the hospital's responsibility to regulate the social life of these women and this would constitute an added burden.

Christian hospitals should measure up to secular institutions "and then some" in the opinion of Dr. W. H. Jordan of Asbury Hospital, Minneapolis, in leading a round table discussion on "Progress and Standardization." Only thirteen Methodist hospitals of 100 beds and over have been recognized on the approved list of the American College of Surgeons, he declared, but many more would overcome slight handicaps which barred their recognition before another year. Insufficient financial support to enable the institutions to provide x-ray and other laboratory equipment and to install a system of case records is responsible for many failures to obtain approval.

Dr. N. E. Davis discussed organization and hospital administration with particular relation to the church in a brief address. Dr. William J. Davidson, executive secretary of the commission of life service, addressed the convention on "Life Service and Nurse Training."

On Wednesday evening following a social hour and special music by the nurses' chorus from Wesley Memorial Hospital, Dr. W. A. Robinson, superintendent of Christ Hospital, Cincinnati, spoke on "The Devil and the Benevolence," a discussion of hospital financial problems as related to the church. Stereopticon slides of hospital and homes under the jurisdiction of the denomination were shown by Dr. Davis. Other addresses had to do purely with the question of homes for the aged and for children.

Matthew O. Foley, executive secretary of the National Hospital Day committee, brought before the convention plans for the 1922 observance of the day and a resolution was passed reaffirming the association's previous endorsement of the movement.

CONFERENCE ON EDUCATION, LICENSURE, PUBLIC HEALTH AND HOSPITALS

The annual Congress on Medical Education, Licensure, Public Health and Hospitals will be held in Chicago March 6 to 10, at which meeting will be presented the American Conference on Hospital Service, the Federation of State Medical Boards of the United States, the Association of American Medical Colleges, the Council on Medical Education and Hospitals and the Council on Health and Public Instruction of the American Medical Association.

On Friday, March 10, is the session on the hospital and dispensary conducted by the American Conference on Hospital Service. The complete program for the day's session follows:

Address of chairman, Dr. Frank Billings, president of the American Conference on Hospital Service.

"The Fundamental Principles of the Standardization of Hospitals," John G. Bowman, chancellor of the University of Pittsburgh.

"Qualifications and Training of Hospital Superintendents," Dr. Arthur C. Bachmeyer, superintendent of the Cincinnati General Hospital.

"Hospital Library and Service Bureau," Dr. Malcolm T. MacEachern, general superintendent of the Vancouver General Hospital, Vancouver, B. C.

"The Dispensary as a Factor in Medical Education and as a Diagnostic Clinic," by Dr. William S. Thayer of Baltimore.

"The Dispensary in Its Relationship to the Public and to the Medical Profession of the Community," Michael M. Davis, Jr., chief of Service Bureau on Dispensaries and the Community Relations of Hospitals of the American Hospital Association, New York.

"The Relationship of the Dispensary to the Hospital," by John E. Ransom, superintendent of Michael Reese Dispensary, Chicago.

The opening day's program will be in charge of the Council on Medical Education and Hospitals and will have to do with public health and educational problems. On March 7 there will be an address by Dr. Theodore Hough, president of the Association of American Medical Colleges, and reports from various schools and colleges of medicine in the Middle West. The program on March 8 will be devoted to the subject of medical examinations and licensure. Thursday's program, March 9, will be on the general topic of the organization of the public for cooperation with the medical profession.

VERMONT IS NEWLY ORGANIZED

Organization of the Vermont Hospital Association took place on December 3 at a meeting at Burlington. The following officers were named: Benjamin Williams of Proctor, president; Dr. T. S. Brown of Mary Fletcher Hospital at Burlington, vice-president; John P. Adams of St. Albans, secretary; and Miss Mary Carr Newell of Rutland Hospital at Rutland, treasurer. The executive committee is composed of the officers and the following: Sister Mary Collins, superintendent of Fanny Allen Hospital at Winsooki; Rev. Mr. Fraser Metzger of Randolph; and Dr. T. A. McCormick, superintendent of St. Albans Hospital at St. Albans.

The next meeting is to be held in September at a place not yet named.

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MISSOURI HOSPITAL ASSOCIATION IS PERMANENTLY ORGANIZED

More than fifty hospital superintendents, trustees, members of staffs and others interested in hospital work attended the St. Louis meeting on February 17 at which the Missouri Hospital Association was organized. At an evening meeting at Hotel Statler a constitution and by-laws were adopted, officers chosen and a motion passed to seek affiliation with the American Hospital Association.

Dr. L. H. Burlingham, superintendent of Barnes Hospital and St. Louis administrator of St. Louis Children's Hospital, was elected president of the new organization.

Other officers include the following: First vice-president, Dr. B. A. Wilkes, superintendent of Missouri Baptist Sanitarium, St. Louis; second vice-president, Miss Sarah H. Reitz, superintendent, Audrian Hospital, Mexico; treasurer, Dr. Louise Ament, superintendent, Lutheran Hospital, St. Louis; trustee for one year, Dr. Rush E. Castelaw, superintendent, Christian Church Hospital, Kansas City; trustees for two years, Miss Isabelle Baumhoff, superintendent, St. Louis Maternity Hospital, and Dr. Guy L. Noyes, superintendent of Parker Memorial Hospital, Columbia; trustees for three years, Miss Mary G. Burman, superintendent of Children's Mercy Hospital, Kansas City, and Dr. M. O. Biggs, superintendent of State Hospital No. 1, Fulton.

DR. L. H. BURLINGHAM
President, Missouri Hospital Association.

A local committee, headed by Dr. Rolla Henry, furnished all delegates with transportation to such hospitals in St. Louis as they desired to visit. For those who wished to study some particular feature of hospital work, suggestions were given by the committee as to where such features were best demonstrated and a route was mapped out which included them. The entire morning was given over to getting acquainted and to visiting hospitals.

Luncheon for all those in attendance was given at the St. Louis City Hospital at 1 o'clock, following which a tour of the hospital was made.

Dr. A. R. Warner, executive secretary of the American Hospital Association, was the speaker at the evening session, which followed a dinner at Hotel Statler. The business session concluded the day's events.

NORTH CAROLINA HOSPITAL WORKERS HAVE LIVE ANNUAL MEETING

North Carolina held the most enthusiastic hospital association meeting in its history on January 31 at High Point, it is said. More than 100 hospital administrators of the state were present when Dr. H. B. Hiatt, chairman of the committee on arrangements, called the meeting to order in the assembly room of the Sheraton Hotel.

Mayor John W. Hendrick of High Point delivered the address of welcome to the convention on behalf of the city and Dr. John A. Williams of Greensboro extended welcome to the assembly on behalf of the Guilford County Medical Society. Response to the addresses was made by Dr. James M. Parrott of Kingston, member of the executive committee.

Dr. John T. Burrus' presidential address on "Our Duty to the Sick" was interestingly given and well received. The principal address on the evening program was given by Dr. Howard A. Kelly of Baltimore on his experiences in handling "The Cancer Problem." His remarks brought much applause. Round table discussions of the afternoon concerned problems of the hospital and nurses' training school. Several commercial exhibits were on display.

Officers of the association chosen at the meeting include: Dr. J. A. Williams of Greensboro, president; Dr. James R. Alexander of Charlotte, secretary-treasurer. Dr. Alexander succeeds Dr. John Q. Myers, who has served since the organization of the association.

The next meeting of the association will be held at Wilson, the date to be fixed by the board of trustees, which consists of the following members: Dr. J. M. Parrott of Kingston, Dr. L. B. McBrayer of Sanatorium, Dr. J. W. Long of Greensboro, and Dr. John Q. Myers of Charlotte.

CATHOLIC HOSPITAL ASSOCIATION TO MEET AT CAPITAL

Washington, D. C., has been chosen as the meeting place of the 1922 convention of the Catholic Hospital Association of the United States and Canada, the sessions to be held at the Catholic University on June 20, 21, 22 and 23.

Accommodations at the Catholic University are excellent for the work of the convention, says Dr. B. F. McGrath, secretary-treasurer of the association, for the housing of the sisters and clergy and for commercial exhibits. Details in regard to registration will be worked out soon.

The 1922 program aims particularly at practical things. There will be fewer general meetings and more emphasis will be placed upon department conferences, it is said. Clinics will be held for physicians and surgeons.

Firms who plan to have exhibits at the convention are being asked to communicate directly with Dr. John M. Cooper at the Catholic University. Other information regarding the convention can be obtained from Dr. McGrath, secretary-treasurer, at 1212 Majestic Building, Milwaukee, Wis.

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DISPENSARIES AND OUT-PATIENT DEPARTMENTS

Conducted by MICHAEL M. DAVIS, JR., Ph.D., Executive Secretary Committee on Dispensary Development, United Hospital Fund of New York, and Chief, Service Bureau on Dispensaries and Community Relations of Hospitals, American Hospital Association, 15 W. 43rd Street, New York
and by ALEC N. THOMSON, M.D., Director of Medical Activities, American Social Hygiene Association, 370 Seventh Avenue, New York

PAY CLINICS FOR VENEREAL DISEASE*

By ALEC N. THOMSON, M.D., Director of Medical Activities, American Social Hygiene Association, New York

THE prevalence of venereal disease, while an unknown quantity, is sufficiently great to warrant consideration as a special problem in that general field of public health which is usually understood as including all communicable diseases. Gonorrhea and syphilis are serious diseases that call not only for a certain degree of specialized knowledge, ability and equipment for treatment and diagnosis, but also for an understanding of their public health and social aspects. Because of the necessity for frequent return visits in the procedure of diagnosis and treatment of these diseases and because of the long period of time required to approximate a cure, the problem becomes complicated from a social, public health, and economic point of view.

The development of the pay clinic for patients suffering from venereal disease is a natural reaction against the various factors that have combined to hamper the health officer in his campaign against this special menace and to handicap the infected individual who is unable to meet the average fee of the well qualified practitioner for the necessary long-continued course of treatment and observation. Frequently in the past the patient of average financial resource was not admitted to ordinary dispensary treatment. Under present methods of investigation the restrictions have been made more flexible because of the present-day appreciation of such factors as long-continued and costly treatment. Perhaps more frequently today, the patient, though entitled to dispensary treatment under the present rules of admission, does not desire to avail himself of mere charity, as he interprets it. Whatever the sum total of the considerations may have been, the fact remains that pay clinics for the treatment of gonorrhea and syphilis have been established in various places. Measured in terms of public health, in terms of better service to the infected individual, in terms of reasonable compensation to the physician, in terms of reducing the cost to the patient, these clinics have proved successful.

These pay clinics are of various types; are held at various hours; charge various fees; and serve various groups in the community. The theory upon which the pay clinic seems to be based is that of bringing the best specialized medical service within the reach of the average individual. This plan seems to be easily workable for such branches as the specialties of nose, throat, eye, and the like, in which costs for minor surgical procedures are relatively high, and the period of care and observation of the patient is short. In the special field of gonorrhea and syphilis, however, the problem is more complex and the need for low cost and high grade service is even greater. Treatment is over a long period, and both drugs and equipment are expensive. Laboratory tests for diagnosis, control of treatment, and determination of cure are numerous and somewhat expensive. Time lost from work because of pain, mental distress, physical disability, attendance for treatment, as well as the readjustment of the individual to the community from the point of view of public health and social welfare, are factors difficult to measure but extremely important to consider. There is an endless number of elements that enter into the problem. The solution that we seek seems to lie in the application to the art and science of medicine those common sense measures that have proved efficient in other fields of endeavor —organization and economy. Can adequate special treatment be administered by physicians of ability to large numbers of persons through organized effort at a decided reduction of costs to the patient, coupled with proper remuneration for the doctor? If so, can it be done as far as venereal diseases are concerned without any dislocation of the usual relation between patient and medical adviser? It seems reasonable to assume that, with proper personnel, ethical publicity, social viewpoint, public health ideas, and modern professional procedure, the dispensary can maintain, as a self-sustaining unit of a community institution, a clinic for the treatment of gonorrhea and syphilis in order to provide a service for individuals who receive inadequate care or no care because of a financial and social status that places them in the "no treatment land" between the usual dispensary clinic and the private specialist.

The private practitioner sometimes looks upon and criticizes the dispensary as a competitor. If he does, it is to be expected that he will more frequently feel and more forcibly state that the pay clinic is a competitor. Generally speaking, investigation discloses that there are admitted to venereal disease clinics not over two per cent of patients who could afford to pay for private service of the same standard. The figures of the general dispensary of the University of Minnesota for the month of October, 1920, showed that seven and one-half per cent of the applicants were refused admittance because they did not come properly within the class of dispensary patients. If this is true, it is reasonable to assume that the seven per cent came within the classification that might be admitted to a pay clinic, and that some of the patients

*Read as a part of a Symposium on Pay Clinics before the Section on Medicine of the New York Academy of Medicine, October 18, 1921.

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within the classification entitled to admission to the free clinic were really able to pay something for the service they received, though not the equivalent of the average physician's fee. When it is realized that in New York City a year of treatment, which the syphilographer regards as adequate, costs the patient between $300 and $400, it can readily be seen that there must be a large group of infected individuals unable to finance this period of intensive treatment, to say nothing of three or four additional years of treatment and observation. The pay clinic that can take care of the patient for $75, $100, or $125 renders, therefore, a distinct service to the community, to the patient, and to the physician.

Obviously, the physician in a pay clinic should be compensated. The physician must consider his compensation in three ways: first, in the experience which he constantly receives; next, in the prestige which he derives from his connection and from the large volume of work; and, finally, in the financial reward, which alone is not entirely commensurate with his work. On the other hand, we find that the average physician who is paid for his clinical work receives approximately $5 an hour, which, on the basis of full time, figures to a rate of compensation equivalent to a net income of $10,000 a year. This is based on a six and one-half hour day, six days a week. It is a net income greater than the average medical man's gross receipts, or even his grand total with uncollectable bills included. In other words, he can well afford to devote some hours a week to pay clinic work, upon a purely selfish basis.

First Pay Clinic in Boston

In 1914 the Boston Dispensary established the first pay clinic for venereal disease. Its experience has shown that there has been no abuse of the dispensary facilities; that there has been no very serious complaint on the part of the medical profession; that more patients with venereal disease are being treated by the private practitioner in Boston today than ever before; and that the clinic has provided a much needed facility. The clinic has grown from 5,380 visits in 1914 to 27,109 visits in 1920. These figures include men, women, and children.

In 1915 the second pay clinic for venereal disease was started at the Brooklyn Hospital. The clinic has had a less dramatic growth than the Boston Dispensary, but has also rendered a distinct service to the community and to the physician. The opposition to this clinic in the early stages was not appreciable, although there were undoubtedly criticism and complaint before the profession thoroughly understood the service that such a clinic can render. As the clinic grew and its work became understood, a considerable percentage of patients was referred to the clinic by the physicians to whom they came, indicating that the medical profession needs such a service as that of the pay clinic.

Following the opening of venereal disease pay clinics in the Boston and Brooklyn dispensaries, additional pay clinics were established elsewhere, among the early ones being two pay clinics in Cleveland. The medical profession of Cleveland, upon receiving complaint that these clinics were trespassing upon the territory of the private practitioner, officially studied and investigated the situation; and, while in their general report there was some criticism of one hospital's methods, there was no refutation of the soundness of the philosophy of pay clinics in general, nor was there any criticism of the policy and methods of the other hospital.

In Chicago an organization that is campaigning against venereal diseases maintains a pay clinic for venereal diseases that is not affiliated with any hospital or general dispensary. It is questionable whether or not the best service can be rendered by an isolated clinic. The clinic that is part of a general dispensary has untold advantages of consultation, of common use of laboratory, nursing and social services, of general administration, and the like, which should result in a reduction of costs and in greater efficiency. This clinic, however, has been very successful. It is meeting an apparent need of the community. It is self-sustaining. There has been marked disapproval of this clinic by the medical profession, but this disapproval does not appear to be based entirely upon sound reasoning and appears to be, in part at least, aggravated by personal considerations and elements of jealousy.

There is also another type of pay clinic in Chicago—an interesting experiment under private auspices, which is advertising to the public in the daily press. This type of clinic for the treatment of venereal disease is open to many serious objections and criticisms. It is difficult to keep out the elements of quackery. The clinic was founded and is backed by men of wealth, upon the principle that everyone and anyone is entitled to relatively standard service at a standard price. If you buy a pair of shoes worth $5 at retail for $5, you are being dealt with fairly. If, in the same environment with the same service, you pay $7 or $10 for a $5 pair of shoes, you are being "done." If, on the other hand, you choose to buy a $5 pair of shoes surrounded by luxury, much personal care, attention, and service, then you have to expect to pay for this high overhead and to pay $10 for a $5 pair of shoes. The theory is intriguing but difficult to apply to the ordinary medical problems. Nevertheless, this clinic has grown until now it is said to be treating from 300 to 600 patients a day at an average fee of $1 or $1.50 for gonorrhea or syphilis. This clinic, too, has been investigated by the medical profession and criticized in its weak spots. Its principles, however, are of such importance as to warrant greater consideration than has heretofore been given to the subject.

Group medicine frequently resolves itself, in the final analysis, into the private pay clinic. In Rochester, Minn., it is possible to receive a six weeks' course of intensive treatment for syphilis at a total charge, including transportation and hotel bills, which approximate the average fee in New York City for the same period of time. In many places the difficulties surrounding the provision of treatment for those suffering from gonorrhea or syphilis are so pressing that great thought is being given to the problem of the provision of adequate treatment and diagnostic facilities at a reasonable cost. Up to the present moment nothing better has been offered than the pay clinic, either private or public. The individual practitioner of medicine cannot economically administer a dose of salvarsan for $5. The pay clinic, organized on the basis of making no profit, can administer salvarsan for $5 and compensate the administrator. The business principle of reducing cost as the volume of production increases applies, with certain modifications, to medical practice. It is our opinion that the pay clinic for the treatment of gonorrhea and syphilis has come to stay, whether the medical profession likes it or not. It is our further opinion that the dispensary must recognize its limitation in this field, and that the profession must recognize its obligation. This obligation calls for the staffing of the dispensary pay clinics and the establishing of private pay clinics for the purpose of combating the venereal diseases—one of the greatest public health menaces and economic liabilities.

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Conducted by HERBERT J. HALL, M.D., President, American Occupational Therapy Association, Devereux Mansion, Marblehead, Mass., and MRS. CARL HENRY DAVIS, Advisor in Occupational Therapy, 825 Lake Drive, Milwaukee, Wis.
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ACCOMMODATION FOR OCCUPATIONAL THERAPY IN FEDERAL TUBERCULOSIS SANATORIUMS

BY THOMAS B. KIDNER, INSTITUTIONAL SECRETARY, NATIONAL TUBERCULOSIS ASSOCIATION, NEW YORK

IN ITS study of the requirements for sanatoriums for the care and treatment of ex-service men, the United States Public Health Service arrived at certain standards and prepared type plans for housing the patients. Because, however, of the widely varying conditions of hospital sites (not to be foreseen) it was decided that, as regards accommodation for occupational therapy and pre-vocational training, it was not feasible to try to prepare standard plans. It was felt that it would be better to place in the hands of architects a statement or specification of the standard requirements, each architect being then free to fit into his building scheme the necessary accommodation.

In the units for tuberculous patients now being erected at several of the branches of the National Soldiers' Homes, the architects have taken advantage of the contours of the site and have provided both for recreation and occupational therapy in the lowest stories of the patients' units. This has also been done in the remodeling of the Soldiers' Home at Johnson City, Tenn., which is now the National Sanatorium. In no case can the rooms provided be termed "basements," as they are almost wholly, sometimes entirely, out of the ground, well lighted and airy.

Needs of Tuberculous Patients

The following statement of requirements is taken from United States Public Health Service Report No. 24, June 17, 1921:

"While much of the work of occupational and pre-vocational therapy is carried on in a sanatorium in the wards and on the porches, especially in the semiambulant patients' quarters, it is necessary to provide a center for this work to which an ambulant patient may go when his condition permits, and from which the work may be directed.

"In small institutions, the occupation therapy center or 'vocational building' (as it is sometimes termed) is usually combined with the community building, but in large institutions a separate unit is usually arranged.

"In considering what accommodation is necessary for occupational activities in institutions devoted to the care and treatment of ex-service men, the fact must be borne in mind that under the provisions of the Vocational Rehabilitation Act many of the men, before leaving the sanatorium as arrested cases, enter upon courses of pre-vocational education, leading to subsequent vocational training for some new occupation. Such work is also of value in helping to harden patients physically while they are still under medical supervision. Provision should therefore be made in a sanatorium not only for the work which is given for therapeutic purposes, but also for pre-vocational work which will lead to or from an introduction to specialized instruction after a man leaves the institution.

"*Accommodation required.*—Until a man reaches the fully ambulant stage, practically all the occupational therapy work can be done either in the wards or on the porches in the hospital, and in the semi-ambulant patients' quarters. It is convenient, therefore, to have a store closet for materials or, better still, a small room on each floor of the hospital building and in each of the pavilions for semi-ambulant patients. Beyond that, an office for the chief aide, a storeroom for supplies, and a room with a bench or two where work done on the wards can be finished, will usually meet the needs of the work which is given to patients who have not reached the ambulant stage.

Vocational Buildings for Ambulants

"For patients who have reached the ambulant stage, a much wider range of work can be undertaken. Various rooms are required, and there is need for special quarters in what may well be termed a 'vocational building.'

"Broadly speaking, the work may be divided into classroom subjects and shop work. The classroom subjects will vary scarcely at all in different parts of the country, but the shop work may be supplemented or varied by gardening and agricultural work where climatic and other conditions permit.

"The exact number of rooms to be planned will depend upon the size of the hospital, but provision should be made so that at least seventy-five per cent of the ambulant patients can be accommodated, either in classrooms or shops, at one time. It may be considered that this is high, but it must be remembered that the hours of 'exercise' are limited; also, that semi-ambulant patients nearing the stage of full exercise are often directed by the physician to take periods in the classes or shops.

General Plan of School

"*Suggestions for rooms.*—Administration:

(*a*) An office for the chief aide; say, 10 by 12 feet.

(*b*) A storeroom for materials; say, 10 by 12 feet.

(Continued on page 294)

Make Use of This Castle Offer for Your New Sterilizing Needs

THERE is a force of sterilizer experts at the Castle plant who want to help you. Whether your field is that of the architect, the superintendent, or the consulting engineer, we have the data and experience in sterilizing which will help you.

Our fund of information is yours for the asking. Just outline your problem to us. As a starter we wish very much to send you our complete and splendid catalog of hospital sterilizer equipment. It is brand new. Let us have your address.

CASTLE

WILMOT CASTLE CO.
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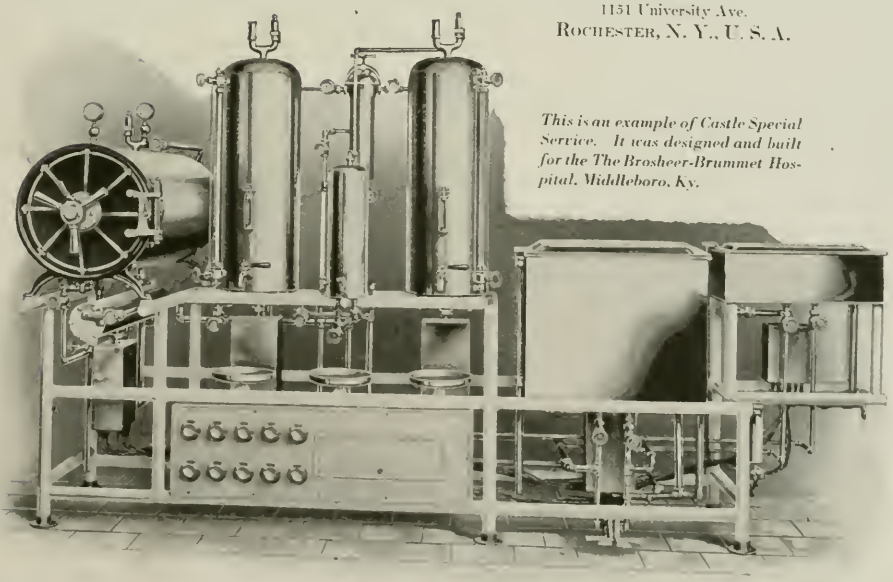

This is an example of Castle Special Service. It was designed and built for the The Brosheer-Brummet Hospital, Middleboro, Ky.

(*c*) A room for finishing (assembling, varnishing, dyeing, enameling, etc.); say, 12 by 18 feet.

(*d*) An office for the vocational director; say 10 by 12 feet.

(*e*) A storeroom for stationery, books, and other supplies for academic classes; say, 6 by 12 feet.

(*f*) A storeroom for shopwork supplies; say, 10 by 25 feet.

(*g*) Toilet rooms for male and female instructors.

(*h*) Toilet rooms for students.

"*Classrooms.*—Because of the individual nature of the instruction, classes should not exceed sixteen students. The floor space should provide not less than 35 square feet per student; thus a room 20 by 28 feet would accommodate sixteen students. The room should be lighted on one of the long sides, with windows of the side-pivoted type preferably, the light to come from the left of the students. The radiation should be installed below the windows, and a foul-air vent arranged either in the ceiling or high up in the opposite wall. Standard blackboards of slate (or, in temporary construction, of hyloplate) should be installed on the wall at the rear of the teachers' desk and on the wall facing the window. A sink for washing blue prints should be installed in the drafting room; size, about 18 by 30 inches.

"Generally, four branches of study should be provided for:

(*a*) Academic.

(*b*) Typewriting.

(*c*) General commercial.

(*d*) Mechanical drafting.

"Provided that properly deadened floors are installed, the classroom may be in the upper story of the building in which the shops form the ground floor.

Workshop Requirements

"*Shops and laboratories.*—While suggestions will be made as to sizes of units, it is well to arrange that the interior partitions be of light construction and installed in such a manner that they may easily be moved, should changes be necessary.

"Factory-type windows are desirable and should extend to the ceiling. At least fifty per cent of the sashes should be capable of being opened, preferably horizontally, on side pivots. Light on two adjacent sides of the room is desirable and the window-glass area should not be less than one-fourth the area of the floor space.

"Each unit should accommodate from ten to twelve students and should provide not less than 150 square feet of space for each student. The floors should be of heavy groove-and-tongue batten or wood block. Ceiling should be not less than thirteen feet high.

"The following are typical of the subjects often given in shops in a sanatorium for tuberculous ex-service men:

(*a*) Watchmaking, jewelry, engraving, etc.

(*b*) Tailoring.

(*c*) Shoemaking (provide for a five-horsepower electric motor).

(*d*) Commercial art.

(*e*) General technical shop or laboratory, used for arts and crafts work of more advanced type than is possible in bedside and ward occupations; also for 'try-out' work in cases where the indications as to a student's capacity, inclinations, etc., are not clear. (Provide for a ten-horsepower electric motor.)

"In sanatoriums in which gardening, agriculture, and other outdoor work form a part of the active features of the vocational classes, it is probable that shoemaking or tailoring or both would be omitted. Instead, a laboratory for science related to the outdoor studies would probably be installed.

"In each workshop water should be laid on and a kitchen or other working sink installed."

SHOULD OCCUPATIONAL THERAPY BE COMMERCIALIZED?

"The fallacy of putting occupational therapy on a commercial basis" is an expression used in a recent communication addressed to this department. It is delightful to have something to quarrel about. If there were no differences of opinion, occupational therapy would be far less alive and stimulating. Aides, directors and interested medical men are cordially invited to write to the editors, expressing their opinion on this important question: "*Should occupational therapy be concerned with the commercial value of its products?*"

Some of the leaders in occupational therapy have always stood out frankly and firmly for a modified commercialism. "The more valuable the product, the better the therapeutic effect" has been one of their articles by faith. Like most catch phrases, it expresses only a partial truth. Probably no experienced occupational therapy worker is so far gone in commercialism as to assume that a poor piece of work may not represent a veritable triumph for aide and patient, even though the money value is nil. But is it not up to occupational directors to put enough thought and skill into the preparation of their problems so that a valueless product will be the rare exception? Is it not true that, given the right materials and a proper supervision, the therapeutic work of the handicapped may almost always be good enough to command a legitimate market? May it not be that a really valueless product reflects upon the skill of the aide rather than upon the patient?

Our efforts in occupational therapy would be wholly justified if no product of commercial value ever resulted from the labors of our patients, but if we can add the encouragement, the delight, of a small money return, shall we not be wholly justified? Can we afford to ignore human nature that wants something tangible, more tangible even than returning efficiency as a reward for labor accomplished? Is not the laborer "worthy of his hire" even if he happens to be an invalid? We have, no doubt, a right to spoil an unlimited quantity of good material if by doing so we may even in the slightest degree improve the courage and effectiveness of our patients. But have we a moral right to spoil that good material if, by a little more thought and skill on our part as teachers, we may see it converted into a legitimately saleable product for the benefit of the patient and for the support of the system?

These are interesting and important questions. Serve the good cause by reporting instances where the commercial spirit has interfered with the best therapeutic results. Report to us, also, cases in which the money value of occupational therapy products has actually helped the patient to make progress toward recovery.—THE EDITORS.

OCCUPATIONAL THERAPY NOTES FROM MISSOURI

The board of managers of state eleemosynary institutions of Missouri, with offices at Jefferson City, has secured the services of Dr. George P. Ard as state psychiatrist. Much interest is being manifested in occupational therapy, it is declared; departments will be opened as rapidly as high grade graduates with experience can be found.

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ROYAL

Absolutely Pure

Baking Powder

Adds only wholesome qualities to the food and makes it appetizing.

CONTAINS NO ALUM

Your Occupational Therapy Supplies

For *65* years the name "Prang" has stood for "*Quality*" in Hand Work and Art Supplies. These "*Prang Products*" are being used by hundreds of the leading public, private and U. S. Government Hospitals for Occupational Therapy. They have *Educational* as well as *Therapeutic* value.

"Enamelac"

The Air-Drying Decorative Art Enamel

Ideal for all work in Decorative Design. It works on wooden boxes, toys, furniture, tin cans, glass bottles. Also on "Permodello" and "Ivorene" Jewelry. "Oilette Cloth," etc. Made in 22 colors. Price, per can, 30c. Outfit of 6 cans, shellac, turpentine and 3 brushes in hinged box, postpaid, $3.00.

"Permodello"

The Permanent Modeling Clay—works like magic

This new Modeling Clay looks like ordinary clay but when exposed to the air it sets like concrete and becomes hard. It is used for making beads, jewelry, and hundreds of useful and beautiful articles. When hard it takes decoration with "Enamelac" Price, per pound can, 60c.

Long-Leaf Pine Needles

Native Material for Basketry and all Weaving. Needles from 12 to 18 inches long, beautiful in color, easy to weave. Price, per pound, 60c.

"Bateeko Dyes"

The Perfect Dye in Powder Form

While originated for "Batik" Work, they are ideal for all Art Dyeing. Price, per packet, 25c. Beautiful book on "Batik," by Lewis, postpaid, $1.60.

"Dekko Board"

For All Decorative and Construction Work

This is a new Composition Board for making Toys, Table Mats, Boxes, Waste Baskets and other Novelties. Takes decoration with "Enamelac." Ready cut circles in 4 sizes for Table Mats. This new and inexpensive Board will solve many of your hand-work and construction problems. Send for sizes and prices.

"Stixit" Paste

The Stickiest Paste in Town. A Better "Library Paste."

"Stixit" was the first improvement in "Library Paste" in 25 years. 4-in. tube, 10c. 6-in. tube, 15c. ½-pt. tin can, 30c. 1-pt. tin can, 55c. 1-qt. tin can, 90c. 1-gal. tin can, $2.75.

"Modelit" Modeling Clay

The Wax Modeling Clay Never Hardens

¼ pound brick	$0.15
1 pound brick	.50
5 pound brick	2.25
Clay Flour, per 5-lb. bag	.40

Raffia and Reed

Natural Raffia, per pound	$0.30
Colored Raffia, per pound	1.00
Reed, Nos. 1, 2, 3, per pound	1.45
Nos. 4, 5, 6, per pound	1.35

"Ivorene" Jewelry

"Ivorene" is the newest material for work in Decorative Design. It looks like ivory, but comes in sheet form. It can be cut with a sharp knife or a coping saw. It takes "Enamelac" decoration and makes Pendants, paper cutters, book marks, tags, and many other practical articles. Per sheet 4 x 5 inches, 30 cents; 5 x 10 inches, 75 cents. Also cut larger sizes. Illustrated circular free.

"Ivorene Novelties"

We supply a line of eight "Ivorene Novelties" ready for decoration with "Enamelac." Your patients will delight in making designs for, and decorating these novelties that make artistic and useful gifts. Square mirror, $2.00 per doz.; Pen Wiper, $1.60 per doz.; Memo. Book, $2.00 per doz.; Circular Mirror, (2½ in. diam.), $4.00 per doz.; Mirror (3¼ in. diam.), $5.50 per doz.; Vanity Case, $5.50 per doz.; Tape Measure, $3.00 per doz.; Signature Blotter, $2.00 per doz. Send for illustrated circular.

A copy of our new 28-page illustrated "Prang Bulletin" will be sent free to hospitals and O. T. workers

THE PRANG CO., 1922 Calumet Ave., Chicago. 118 E. 25th St., New York City

In November, 1921, Miss Dorothea E. Fischer opened an occupational therapy department at the Missouri State Sanatorium for the Treatment of Incipient Tuberculosis at Mount Vernon. Miss Fischer is a graduate of the St. Louis School of Occupational Therapy. During 1920-21 she was employed by the Missouri Association for Occupational Therapy as head instructor of the shop for handicapped, and was reluctantly given up for much needed state work.

Mr. T. B. Kidner, institutional secretary of the National Tuberculosis Association, recently visited St. Louis to confer with the St. Louis Tuberculosis Society regarding open air schools and new buildings for Koch Hospital, a city institution for tuberculous patients. He also visited the state sanatorium at Mount Vernon in regard to improvements in buildings there. Returning from Mount Vernon through St. Louis, Mr. Kidner spoke at a luncheon given by the board of trustees of the Missouri Association for Occupational Therapy and at the St. Louis School of Occupational Therapy to the student occupational therapists from various hospitals, and others interested.

THE AIMS OF THE AMERICAN OCCUPATIONAL THERAPY ASSOCIATION

By G. CANBY ROBINSON, M.D., Vice President.

The American Occupational Therapy Association has been formed for the furtherance of the use of occupations as a therapeutic measure and for the organization of the various interests involved in its development. The membership of the association is composed of individuals interested in occupational therapy from several different points of view. First, we have those who are professionally engaged in this field of work and who have found it of sufficient interest and value to choose it as a career. Secondly, we have physicians who are anxious to see the development of the use of occupations as therapeutic measure; and thirdly, we have individuals interested in the development of occupational therapy as a factor in the social and economic betterment of people who are handicapped and afflicted by injury or illness.

Although the points of view are necessarily somewhat divergent in these three groups, it is important that they should have in the association a common meeting ground where all can combine to accomplish certain purposes that are essential for the further development of occupational therapy. These purposes may be considered as the maintenance of standards, the development and recognition of the usefulness of occupational therapy, and the winning of a place for it where it will become a component factor in the treatment of disease and injury.

It is especially important at this time that standards of work should be maintained at a high level. Many workers have been drawn into the field hurriedly on account of the great need that the war has presented, and their preparation has necessarily been rapidly obtained. The association should endeavor to encourage further development of skill and knowledge for these workers and should do all that it can for better preparation in the future. The early days of a general movement, such as the association represents, are always critical, and the future of occupational therapy will depend in a large measure on the efficiency, tact and earnest endeavor of those actively engaged in the work. The training that is offered in the several schools that have been established can only give the necessary requirements for the future development of the worker, and it should be a function of the association to see that important positions are filled by the people most competent to discharge their duties, who will carry on the work in such a way that it will be effective and impressive. To this end, a system of registration should be installed and a knowledge of training and personal fitness should be catalogued.

The association should take every opportunity to educate the medical profession regarding the usefulness of occupational therapy. It should aim especially to arouse the interest of members of staffs of general hospitals. Unless the profession is interested and alive to the possibilities of the work, its progress will be slow and difficult. The therapeutic value, as well as the advantages in the improvement of hospital morale and general betterment of the individual, should be emphasized wherever possible. It is not likely in the beginning before a satisfactory demonstration can be made that funds of general hospitals will be devoted to this work. It is therefore desirable that associations be formed in various communities, preferably as branches of the national association, which will raise funds and endeavor to introduce the work into institutions of various types.

BOSTON GETS NEXT A. O. T. A. CONVENTION

At the recent Baltimore convention, four cities were considered for the 1922 annual meeting,—Boston, Milwaukee, Colorado Springs, and Augusta. A vote was taken and Boston was chosen, but because the members were not all present and because the invitation to Georgia came from the office of the Surgeon General of the United States Public Health Service, offering the use of the auditorium of the government hospital and other inducements, it was thought wise to rescind the vote and leave the decision to the House of Delegates. That body has now voted as follows: Boston 11, Milwaukee 7, Augusta 3, Colorado Springs 2. The association will, therefore, meet in Boston. It would seem that Milwaukee is likely to be the choice for 1923.

The president, for the society, has issued thanks to the other cities for their cordial invitations.

In selecting Boston as the next meeting place, the House of Delegates was guided by the fact that in no other vicinity has occupational therapy gained a firmer hold or has more to show of actual progress. Among the institutions concerned with occupational therapy within easy reach are the Boston School of Occupational Therapy, the Occupational Therapy Bureau, the Tide-Over League, the Naval Hospital at Chelsea, the Parker Hill Hospital of the Public Health Service, the Massachusetts General, the Peter Bent Brigham and Robert Brigham Hospitals, in Boston proper, Devereux Mansion and the Medical Workshop at Marblehead.

To obtain reduced rates on the railroads and at the hotels, it will be necessary to guarantee a large number of delegates. This guarantee must come at an early date. The pledge will not be binding, but every member of the American Occupational Therapy Association who lives outside of Boston and who expects to go to the convention next fall is requested to send at once his name and address to the president of the association, Dr. Herbert J. Hall, Devereux Mansion, Marblehead, Mass.

DIGGING IN

Occupational therapy, since the demonstration of its value in the military hospitals, has been finding a small and somewhat precarious place in the general hospital system. There can be no doubt of the final full acceptance of the work as a necessary hospital auxiliary, but for the moment one of the chief difficulties in the way of progress is lack of space for supplies and equipment.

Adv. page 54

Hospital Good-Will

Patients usually praise or condemn a hospital according to the food served them

They're Sweet Meats

HERE is a rolled oats whose every flake is a *sweet-meat.* Its totally different taste is the result of the exclusive Purity Process which preserves the natural, sweet, nut-like flavor.

Every flake is also full, round, a perfect oat-meat.

Hence, Purity Oats is a package of sweet-meats. Patients eat it, not as so much rolled oats, but as so much deliciousness.

Free Hospital Package

Write on your hospital letterhead to the Purity Oats Company, Keokuk, Iowa, for the free hospital package. Try this totally different rolled oats.

PURITY OATS COMPANY
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Purity Rolled Oats

Totally Different

Famed for Flavor

The modern hospital has, of course, been built in a way to use every available inch of room for medical, surgical and nursing purposes. Welcome enough by the average well informed hospital superintendent and staff, the trouble has been to find room for occupational therapy. The aides have literally had to dig in. Greatly to their credit, they have carried on successfully in wards, corridors, and basements, with perhaps only a small closet shared with mops and brooms for their supplies. It is, therefore, most encouraging to find that in all new government hospital construction ample room is being provided for curative workshops.

How the matter will be handled in existing civilian hospitals remains to be seen. There is almost always considerable basement space which could be utilized without fire risk, but ideally there should be an industrial building on the grounds, and connected with the main hospital corridors, a building available for out-patients as well as ambulatory ward patients. Ultimately it may be desirable to install various types of automatic machines, so that crippled patients may actually be trained in factory work before they are turned out as cured. If this is done, a somewhat detached building will be necessary to avoid objectionable noise.

The time has already come when hospital architects should include in their plans for new construction adequate space for occupational therapy. The matter calls for no argument. The patient who has not learned to use his injured limbs under skilled direction is no greater credit to the hospital than he would be if he were discharged with a wound half healed or with a fever.—EDITORS.

WOOD-SHOP WORK FOR CONVALESCENTS

By MARY E. RUHL, Supervisor of Occupation, The Burke Foundation for Convalescents, White Plains, N. Y.

The work of convalescent patients in the wood-shops of the Burke Foundation has resulted in the production of many useful and beautiful articles, as well as in improved mental and physical conditions in the patients. Convalescents enjoy this wood-work, and frequently the handi-

Figure 1. Iron braced sled, stool, and croquet mallets, made by convalescent patients at the Burke Foundation.

Figure 2. Stained tables, made at very low cost, by the patients at the Foundation.

Although the hours actually spent by the patient in the work shops are short—the patient on the average spending but one hour a day in the shop for as short an interval of time as ten days—this work-therapy has resulted in important savings to the institution.

Among varied recent products made by the patients are bedside tables, chest-settees, sleds, stools, checkers, croquet sets, and reclining chairs. All are made of cypress. The sleds (See Fig. 1) are iron braced and shod in the engineer's shop. (Note rear projection of inch-thick top board, giving more capacity.) The stools (See Fig. 1), reduced to the simplest lines, are very useful, replacing expensive chairs in many situations, and serving for foot rests. They are easily carried about the grounds.

Figure 3. This illustraton shows the reclining seat made by the patients, in its finished form, and in process of making.

The little tables (See Fig. 2) are especially satisfactory and economical. One board, of any width above twelve inches, cuts for the top, and the finish is of varied stain, in preference to paint. Drawers are avoided for administrative and hygienic reasons. The low cost is a feature.

The reclining seat (Fig. 3), to be left outdoors, is commended for simplicity, having no blocks nor bracing. Any width board serves. The slopes and angles may be changed by placing of the cross-pieces. This seat may be made to fold flat with the use of hinges; however, made in this way, it has a tendency to get out of order. The cost of the recliner is but little over one dollar.

REHABILITATION COURSE AT HARVARD

Harvard University has issued an announcement relative to a summer school course in "Rehabilitation and Reeducation of Handicapped Persons," as a unit of the work of the Bureau of Vocational Guidance of the Graduate School of Education.—*Vocational Summary, April, 1921.*

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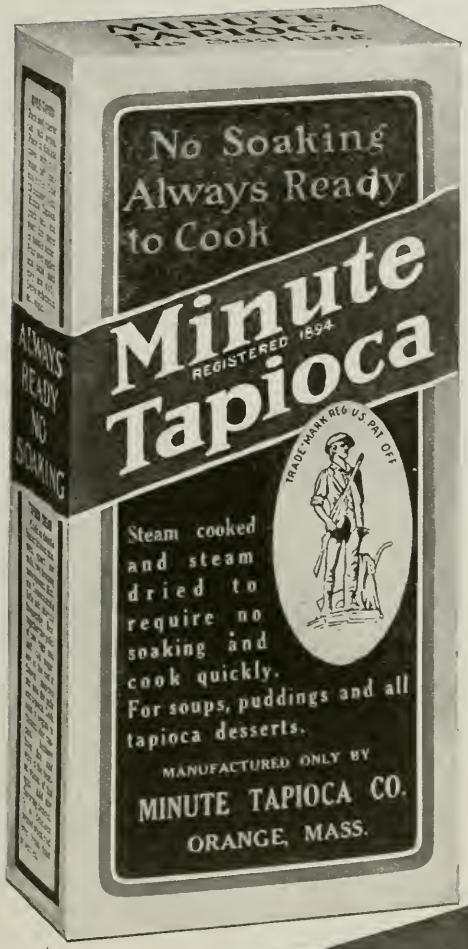

New Hospital-Size Carton

Our new five-pound carton is especially designed for hospitals. It combines the protection of the smaller, tightly sealed carton, which you have been using, with the advantages of the large quantity. The five-pound cartons are packed five to the case (four cases equalling 100 pounds net).

Minute Tapioca is made from the finest tapioca flour by our patented processes. It is carefully steam-cooked and thoroughly inspected. An experienced food chemist has constant supervision of our entire manufacturing processes. So, in Minute Tapioca you have tapioca in its purest form.

Minute Tapioca

It Requires No Soaking

It can be thoroughly cooked in fifteen minutes and is always ready for use. It is high in nutritive value; is easily assimilated, and is especially valuable in many cases of convalescence. It is one of the standard items on the dietary in the majority of hospitals.

Ask your wholesale grocer for the new five-pound Institutional size package of Minute Tapioca. If you have any difficulty or delay in getting it, let us know.

MINUTE TAPIOCA COMPANY, 133 Jefferson St., Orange, Mass.

Makers of Minute Tapioca, Minute Gelatine, and Star Brand Pearl Tapioca

Hints to Hospital Superintendents

"WILLFUL WASTE," ETC.

"Save Money to construct the new hospital buildings" is a good slogan for hospitals just now when many hospitals are cramped for space and hoping to build in that golden future when construction prices come down. This slogan is printed at the top of a little folder sent out by the Presbyterian Hospital of Philadelphia which contains on its first page the following "hints" which might well be passed on by the superintendent to his hospital:

1. Cordial cooperation in and between departments is essential.

2. Physicians, chiefs, assistants and residents, as well as nurses and employees, are requested to bring about the economic use of drugs, dressings, appliances and surgical supplies, as well as all food supplies.

3. *Do not* use an appliance or a surgical instrument, except for the purpose for which it is intended.

4. Save the worn out article or the broken, in order to obtain a new one on requisition.

5. It is sometimes alleged hospitals are wasteful and extravagant. Help to avoid such criticism.

6. Do not light an electric lamp or gas when not necessary. To do otherwise is wasting money. If you find an unnecessary light burning, turn it off. All lights not actually needed should be extinguished by 9 p. m.

7. Do not fill ice-water pitchers full of ice. Use one-third ice and two-third water. A very large saving in money will result from this practice.

8. Keep ice chest and refrigerator doors closed.

9. Turn off hot and cold water faucets. Water costs money.

10. Turn off steam from radiators, when heat is not needed. This will save coal.

11. Blank forms cost money. Do not use them for purposes for which they were not intended.

12. Old rubber is valuable. Do not throw any away. Keep rubber in a cool place. Do not allow any form of grease on rubber, as it causes it to rot.

13. When you have time, do not take the elevator to go up or down one or two flights of stairs.

14. Kindly cooperate in the economical use of linen.

15. China is very expensive. Observe the utmost care in handling.

16. Lack of care in the use of food supplies wastes money. Order only what is needed, and return all unserved food to the kitchen.

17. Before making requisitions, assure yourself that it is *absolutely* necessary.

18. Each ward or department should keep an accurate account of all supplies.

19. Supplies are not to be taken from the hospital.

20. Physicians, nurses and others are requested to practice the utmost economy in the use of guaze, cotton, etc.

21. Loss of time is wasteful and extravagant. For instance: Late on duty often causes confusion and dissatisfaction. Late at meals, not only means delay in going on duty, but extra work in the dietary service and in other departments.

22. Handle all hospital property and equipment with the same care you would if you had paid for them with your own money. Our repair bills are enormous.

23. Request for repairs should be made by the head of the department on blanks provided for that purpose and sent to the Superintendent's office.

24. When we all unite in small economies, it will produce a large economy for the hospital as a whole.

25. The use we make of our present facilities will, to a large extent, determine how soon we can construct the new buildings.

26. The hospital has been carefully operated in the past. Let us emulate our predecessors in keeping our institution in the forefront of the hospital world. To do this we must be careful in our use of all material, equipment, food and other supplies.

SMALL HOSPITALS MIGHT HAVE PRODUCE DAY

The hospitals of British Columbia have a practice which might be followed by small hospitals in any rural community. A certain day in September is set as "Produce Day" when the hospital is the recipient of gifts of potatoes, fruit, and other produce from the surrounding community. This is an annual day in British Columbia and during the past two years it has met with splendid response.

Another economy which it is more possible for the small hospital to carry out than for the large one is that of putting up its own canned fruit for the year. In British Columbia this is now being done, usually by the women of the community or by the woman's auxiliary.

TO PREVENT STEAM ON LENSES

The clouding of the lenses by steam is a common difficulty encountered by persons who wear spectacles. In the sterilizing rooms, kitchens, operating rooms and laundries of the hospital steamed lenses constitute a great annoyance. There is a commercial preparation on the market which when rubbed over the surface of spectacle lenses temporarily prevents them from steaming. This preparation can be obtained from most opticians at a small cost. A simpler remedy even than this is said to be quite successful. The lenses are rubbed with dry soap, the soap washed off, and the lenses then polished for wearing.

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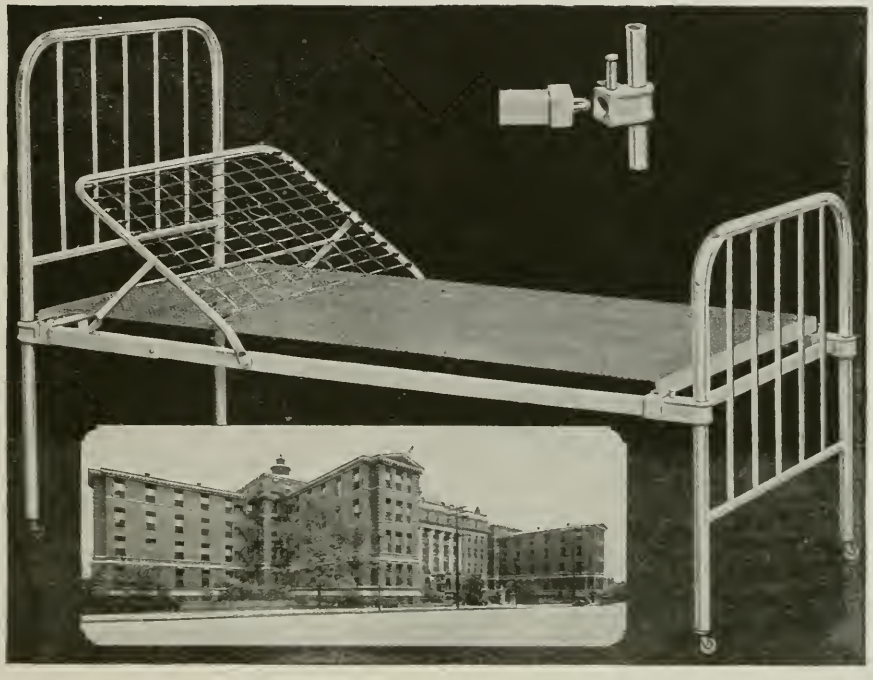

HUNDREDS of hospitals throughout the United States have found our No. 185 the most practical, durable and all-round satisfactory hospital bed obtainable. Follow their lead when ordering new equipment. Specify Smith & Davis beds, cribs, maternity bedsteads, screens, tables, irrigators, utensil racks, bed trucks, conveyors, stretchers, etc., and be assured of utmost possible value in satisfactory service.

We furnish complete equipments for hospitals, sanitariums, college dormitories and similar institutions. Suggestions, blue prints and prices on request. Or, if you have in mind something different in beds or furniture, to be specially built according to your own specifications, we will cordially co-operate with you in its designing and production.

Steel Beds
Brass Beds
Steel Cribs
Hospital Beds
Hospital Furniture

SMITH & DAVIS
Manufacturing Company
St. Louis

Coil Springs
Link Springs
Steel Cots
Canvas Cots
Steel Couches

QUERIES AND ANSWERS

LOCATING A CHILDREN'S HOSPITAL

To the Editor of THE MODERN HOSPITAL:

May I have your opinion regarding the site of our new children's hospital? My board would like to be satisfied that it is acting wisely in voting to keep the hospital where it was originally planned to erect it. An effort is being made by disinterested outside organizations to persuade us to change to a part of the city in which there are only rich homes, and to a site which is four blocks from a car line and about six miles from the center of the city. One large hospital has had to close its out-patient department for lack of cases, although it is directly on a car line and not nearly so far out. We have kept a spot map of our cases, and find that we are about in the center of our work. We have occupied our present location for nearly twenty years and there are several car lines within a block of the hospital. The members of the board feel that since we are conducting a charity hospital with a large out-patient department, the institution should be located near the homes from which our patients come.

HOSPITAL PRESIDENT.

In locating a hospital accessibility is an element the importance of which is accentuated in the case of a hospital conducting an out-patient department, and doubly accentuated in the case of a hospital conducting an out-patient department for children. Other things being equal, a site which is accessible to the patients whom the hospital serves and to the physicians who are served by the hospital is to be preferred. Put the hospital where the patients cannot get at it conveniently, and they may be tempted to go elsewhere; place the hospital in a location where it is difficult for the visiting physicians to get to it, and their gratuitous service to ward and dispensary patients is apt to be curtailed.

Accessibility is only one of the important site values to be considered, however. Characteristics to be evaluated are the size of the site; its shape, contour, and hence its adaptability to free planning; the character of the surroundings (as tending to introduce or exclude noise, smoke, etc.); the prospect of future neighborhood development of a desirable or undesirable kind; evidence of the shifting and growth of population, etc.

So far as hospital patients (in-patients) are concerned, they go to the hospital but once, as a rule, and remain two to three weeks. This makes it worth while to put up with some inconvenience in the matter of approach, provided the hospital is thus enabled to replace obviously bad and unsuitable surroundings with the tonic outlook which a suburban or semi-suburban location affords. Other things being equal, city locations facing public parks are best; those in residential districts next best; and those in noisy or smoke-laden tenement, commercial or factory districts, least attractive. But the choice of a hospital location cannot intelligently be made without careful consideration of all of the local factors involved, as well as with due regard to hospital principles which are applicable generally.

A hospital which is famous for good service will attract patients whether the hospital is accessible or not. It is possible to cite instances of the best type of general hospital, often one with a university connection, and always one possessing a notable faculty, located in the finer residential districts, and comparatively far away from the homes of the poor, but nevertheless freely patronized by the poor, who, having confidence in the institution and its staff, willingly overlook the inconveniences of travel. The degree of inconvenience is, however, a factor.

An inaccessible hospital will be sought more freely by adults than by children. Actual analyses of out-patient services, attached to large and important general hospitals, reveal a striking contrast between the residential sources of adult and immature patients. In one instance two-thirds of the adult patients visiting a large dispensary are distinctly not neighborhood cases, while nine-tenths of the children who are brought to the dispensary come from the immediate neighborhood. The reason is obvious. An adult dispensary patient not acutely ill, probably out of work and able therefore to spare time, will travel miles to reach a desirable dispensary, especially if the dispensary is located near a car line. The mother of a family, however, who is burdened with routine household cares, as well as with the care of a sick child, cannot conveniently abandon her duties in order to spend half a day on a journey to a distant dispensary; besides which, it may be physically impossible for her to carry so far the sick child for whom treatment is sought.

To sum up, then, accessibility is to be taken into serious consideration in the selection of any urban hospital or dispensary site. Nearness to residential sources is more important in the case of a dispensary than in the case of a hospital, and more important in the case of a children's dispensary than in that of an adult dispensary. Other site values should be likewise considered. A hospital with an outstanding reputation for efficient medical service will attract patients no matter how far away their homes may be, but accessibility should not, on this account, be disregarded in choosing a site.—S. S. GOLDWATER, M.D.

FOOD PREFERENCE OF PATIENTS

To the Editor of THE MODERN HOSPITAL:

In serving meals do you consider the food preference of patients?

DIETITIAN.

The food preference of patients is a rather difficult one to handle in an institution, but is a matter that should be given very careful thought, and everything possible should be done to comply with the wishes of the patient. In the private pavilion this can be very easily accomplished by furnishing a menu card with certain selections, with the understanding that these selections be made before the time of serving meals.

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Grapefruit Ripened on the Tree

This new member of our large family of Edelweiss No. 10 Canned Goods has come into immediate popularity. Edelweiss Grapefruit is picked ripe—canned where grown—and delivers to your table all the exquisite flavor the sun develops in those last hours of Nature's unhurried ripening process.

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Book Reviews and Current Hospital Literature

BACTERIOLOGY

By Estelle D. Buchanan, M.S., recently Assistant Professor of Botany, Iowa State College, Ames, and Robert Earle Buchanan, Ph.D., Professor of Bacteriology, Iowa State College, and Bacteriologist of the Iowa Agricultural Experiment Station, Ames. Revised Edition.[1]

Buchanan's Bacteriology, which college students in home economics have borne under their arms and on their minds for these last nine years, appears in new guise. The publishers have not altered its jacket—it still wears the Lincoln green—but its authors, Professors Estelle D. and Robert E. Buchanan of Iowa State College, have made numerous text changes to bring it abreast of speedy advances in the science. For example, the work of the Committee on Nomenclature of the Society of American Bacteriologists has made advisable the revision of the scheme of classification and of names of bacteria. The chapter on the effect of physical agencies on microörganisms has been extended by consideration of these effects upon the life phases of a culture. Marked advance in the knowledge of the scientific basis of food preservation required an elaboration of that topic. Increased emphasis has also been placed upon panary and lactic acid fermentations. The second edition of Buchanans' more nearly satisfies the cry of teachers of general science who have sought a non-technical text, and well fulfills its old function in the special field of household science.

SURGICAL AND GYNECOLOGICAL NURSING

By Edward Mason Parker, M.D., F.A.C.S., Surgeon to Providence Hospital, Washington, D. C., and Scott Dudley Breckinridge, M.D., F.A.C.S., Gynecologist to St. Joseph's Hospital, Lexington, Ky. With 134 illustrations in text. Second edition, revised.[2]

However much the opinions of medical men may differ in regard to the amount of education necessary for the prospective nurse, one always finds the exponents of various specialties convinced that a knowledge of nursing technique required in their particular field is *essential.* This text on surgical and gynecological nursing written by two eminent surgeons exemplifies this point of view. It is a very complete presentation of the body of knowledge that has come to be known as "surgical and gynecological nursing" with the inclusion of only such portions of surgical bacteriology, pathology and symptomatology as is necessary to emphasize the importance of certain nursing duties.

As stated in the preface, "the desire has been constant to prepare a text-book that would supply those needs that were most apparent to the lecturer and operator." A careful study of the book justifies the statement that this aim has been met.

The book is divided into five parts: I. Infection; II. The Field of Surgery; III. Minor Technic in Surgical Nursing; IV. The Patient; V. The Operation; VI. Supplementary Chapters, including one on "The Personal Attitude of the Nurse."

In Part III the chapter on the Carrel-Dakin treatment of infected wounds is an important and new addition, emphasizing as it does the exacting technic, which falls to the nurse.

In Part IV the chapter on Anoci-Association, the technic of which involves the avoidance of suggestions or associations of harm, is of extreme importance and represents a comparatively recent development of modern surgery.

Many illustrations add to the value of the book.

THE DEFECTIVE, DELINQUENT AND INSANE

By Henry A. Cotton, M.D., Medical Director, New Jersey State Hospital, Trenton. The Relation of Focal Infections to Their Causation, Treatment and Prevention. With a Foreword by Adolf Meyer, M.D., Director of the Henry Phipps Psychiatric Clinic, Johns Hopkins University.[3]

The evaluation of focal infections is one of the outstanding contributions of the twentieth century to medicine. Dr. Cotton, author of "The Defective, Delinquent and Insane," is recognized as among the foremost of those who are pushing to its logical conclusion the freeing of the organism of these insidious dangers. In this volume he discusses the physical causes of insanity and methods of treatment actually carried out at the New Jersey State Hospital at Trenton with successful results. In his discussion Dr. Cotton lays emphasis on the physical nature of insanity and the necessity for widespread knowledge of its causes. The simple language in which the author clothes his ideas makes the book completely intelligible to the layman. Detailed analyses of twenty-five cases treated at his own institution, graphic presentation of statistical material, drawings of pathological specimens and radiographic studies add to the interest of the work.

BOOKS RECEIVED

SUBMUCOUS RESECTION OF THE NASAL SEPTUM. By William Meddaugh Dunning, M.D., Consulting Otologist, Fordham Hospital, N. Y. C. and Manhattan State Hospital, N. Y.; Consulting Laryngologist, Ossining City Hospital, Ossining, N. Y., The Alexander Linn Hospital, Sussex, N. J.; Assistant Surgeon, Manhattan Eye and Ear Hospital, N. Y.; Surgeon, Bronx Eye and Ear Infirmary, N. Y. Surgery Publishing Company, New York, November, 1921.

SOME MEDICAL ETHICAL PROBLEMS SOLVED. By Rev. M. P. Bourke, A.M., LL.B., Superintendent of Hospitals for the Diocese of Detroit; Chaplain of St. Joseph's Sanitarium, Ann Arbor, Mich. The Bruce Publishing Company, Milwaukee, Wis.

1. The Macmillan Company, New York, 1921.
2. J. B. Lippincott Company.
3. Princeton University Press, 1921.

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THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment, and Administration of Hospitals, Sanatoriums, and Allied Institutions, and to Their Medical, Surgical and Nursing Services

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LANDSCAPE ARCHITECTURE AS APPLIED TO HOSPITAL GROUNDS

By HERBERT J. KELLAWAY, Landscape Architect, Boston

DURING the past twenty-five years a great change has taken place in the mind of the public regarding our hospitals. While this change is due primarily to advances made in the science of medicine and surgery, attractive buildings and well developed grounds have played an important part. The readers of THE MODERN HOSPITAL may be interested to note some of the possibilities of an unpromising beginning, and so for this article I have selected a specific case,—an institution with which I have been intimately connected in my own home city.

When I was called into conference some twelve or fifteen years ago, the Newton Hospital at Newton, Mass., had been established for more than twenty-five years and many of the buildings had been erected. In the earlier days, institutions of this kind were recognized as a necessity but were not welcome as neighbors. Desirable sites could not be easily secured and in fact many features which today are considered essentials were not then recognized. Fortunately, three most important things were demanded—light, air and dry soil. The site selected—an old farm on the outskirts of the city—had little to commend itself except these three qualifications.

Landscape gardening makes the entrance to Newton Hospital a lure to the passerby.

The first buildings were constructed of wood and consisted of a ward for men and an administration building. As the need of the community increased other buildings were added and, in accordance with the best thought of the time, were constructed as separate units connected by long corridors. The buildings had been placed on a hillside and, from time to time, excavations had been made to secure additional room, thus leaving high unsightly gravel banks as the only outlook from some of the wards.

When I was first consulted, additional land had been donated to the hospital and a large building was to be erected by the same donor. Surveys were first made and a topographical map showing the contour of the land and the location of existing buildings was prepared. With this map as a basis, a comprehensive plan embodying present changes and future development was made. The vision in the mind of the landscape architect was of a park, with lawns, trees and flowering shrubs, available to convalescent patients as a rest spot from the tedium of hospital life and to the shut-ins as an outlook of such beauty as to divert the mind from internal meditation to external observation. There was also a vision of more homelike surroundings and a happier life for the nurses which would be reflected upon the patients entrusted to their care. Some of the details were not deemed advisable in a gen-

Trees and shrubs convert the hospital grounds into a veritable park, verdant in summer and not entirely barren and cheerless in winter.

eral hospital but the important features were all carried out.

The study made it clear that many objectionable features, such as wide steep driveways and walks, large gravel areas and other unsightly objects, should be eliminated. Provision was made for open lawns bounded by trees and shrubbery which were not only attractive but which served as a screen from the street. The lines of the buildings were softened by the planting of shrubbery and vines. Walks and drives were made of easier grades and areas which were gravel wastes were turned into lawns. The barren banks which were too steep to be treated in this way were planted with low growing shrubs and running vines. Depressions were gradually filled and the uneven surface was changed into graceful curves. A scheme for lighting the grounds was also developed; poles were removed and the electric light and telephones wires were placed underground.

As in many such operations there was a shortage of loam and topsoil necessary for the growth of grass or plant life. Every particle was carefully saved even to the natural yellow loam which is usually found below the black top in gravelly and sandy regions.

Flowers and Trees Affect Mood

The study of individual trees for shade and effect and the arrangement of the masses of shrubbery were all a part of the general plan. It was decided to use as far as possible hardy kinds of trees and shrubs which had been tested out by experience in similar locations. One of the most difficult problems was to cover a gravel hill which had been partially removed to give room for the new building. To cover this with loam was too expensive and so out of the question. A little of the topsoil was scraped back to cover the sand in order to protect it from the driving winds. There was not enough to give sufficient soil even for grass and so white pines were planted in small holes filled with loam. The trees were then mulched in order to retain the necessary moisture. A rainy day was chosen for the planting with the result that but few of the two hundred trees were lost.

The new building, "Founders Memorial," was constructed of brick and by force of necessity was faced toward the north. Between this building and the driveway, rhododendrons of suitable colors and other evergreen shrubs were used. As a part of the general scheme there were added, from time to time, flowering trees and shrubs which had been chosen because of their natural beauty and grace. Any evergreen tree which would tend to suggest a cemetery was eliminated and weeping specimens were absolutely discarded, for even plants can give rise to depressing thoughts while flowers such as roses, syringa, lilacs, spiraea, wigelia, privet, honeysuckle and viburnum are a source of pleasure. The plants in each bed were so arranged as to give something which would be in bloom all the season. Even berried plants were chosen to add a little brightness to winter life. These included barberries, the Japanese and wild rose and hawthorne trees. For the low growing blooming plants peonies and phlox were chosen; and to provide early spring flowers crocus and narcissus bulbs were planted in the grass borders of the shrub beds. As bird life is always an interesting study boxes were proposed to attract colonies to the grounds.

Mortuary is Concealed

In the early days the mortuary with all its depressing effect had been erected on the grounds adjacent to several of the wards. The contour of the land which had been an objection in other cases lent itself most admirably to the correction of this defect. A new brick building was erected between two low hills. The entrance to the mort-

By winding wooded paths the pedestrian traverses the grounds.

uary and chapel was made on a lower level reached by a driveway behind one of the hills and outside of the main hospital grounds. On the higher level the driveway within the grounds leads to the ambulance house which is the second story of the mortuary building. Nothing but the ambulance house can be seen from the hospital but there is a direct connection through an underground corridor.

The buildings used as a home for the nurses occupy the highest part of the grounds and were reached by a wide steep driveway. This driveway was made of an easier grade and was narrowed in order to enlarge the lawns and to reduce the wide gravel covered surface.

Change is Complete

Substantial buildings had been erected on quarantined grounds for contagious diseases, but no effort had been made to beautify the surroundings. Here too, the large gravel area was covered with loam and laid out in attractive lawns with low growing shrubs. Between the buildings for contagious diseases and the nurses' home a level spot was utilized as a tennis court for the nurses. In winter time the court is flooded and a small skating rink thereby provided. The wire nets around the court serve as an admirable support for climbing roses and there is perhaps no more beautiful spot on the grounds than this court when the roses are in full bloom.

One who passes through the grounds today can hardly realize that the old farm of 1885 could have been developed into the beautiful grounds as they appear today. Changes which have been made can hardly be expressed in words and must be seen to be appreciated. It is so natural in its treatment that only by retrospective comparison could one realize that the early dream had come true. Photographs taken in the earlier days when compared with recent photographs of interesting outlooks will tell a graphic story of the change.

Great lawns between buildings invite convalescents to speedy recovery.

The trim utilitarian architecture of the ambulance house gives no hint to patients in the buildings across the green that it conceals a morgue.

NURSING PERSONNEL OF TYPICAL WARD

One superintendent of a large hospital has prepared the following table which represents the percentage of coverage of a typical ward with nursing personnel:

Personnel of Ward—
Head nurse.
1 Senior.
4 Intermediates.
2 Night nurses.

Number of Patients—(22).
Ratio of patients to nurse established by hospital: 1 to 4, days; 1 to 12, nights.

Hours of coverage, various positions—

Head nurse—	12 hours	× 365 days	=	4,380 hours.
Senior—	12 hours	× 365 days	=	4,380 hours.
Intermediates—4	× 12 hours	× 365 days	=	17,520 hours.
Night nurse— 2	× 12 hours	× 365 days	=	8,760 hours.

Actual performance—
Head nurse—off duty:

3 hours per day × 365 days	=	1,095 hrs.
2½ week days off per month × 12 hrs. × 12 months	=	360 hrs.
2½ Sundays off per month × 12 hrs. × 12 months	=	360 hrs.
1 hour for meals × 365 days	=	365 hrs.
1 month vacation × 12 hours × 31 days	=	372 hrs.
		2,552 hrs.

Position calls for 4,380 hours of service; off duty 2,552 hours; on duty 1,828 hours or 41 per cent coverage.

Senior nurse—off duty:

3 hours per day × 365 days	=	1,095 hrs.
6½ hrs. class work per week × 4 weeks × 8 months	=	208 hrs.
1 full day per week off duty × 12 hours × 52 weeks	=	624 hrs.
1 hour for meals × 365 days	=	365 hrs.
1 month vacation × 12 hours × 31 days	=	372 hrs.
		2,664 hrs.

Position calls for 4,380 hours of service; on duty 1,716 hours—or 39 per cent.

Intermediates—Off duty:

4 × 3 hours per day × 365 days	=	4,380 hrs.
4 × 6 hours class work × 4 weeks × 8 months	=	768 hrs.
4 × 1 full day per week × 12 hours × 52 weeks	=	2,496 hrs.
4 × 1 hour for meals × 365 days	=	1,460 hrs.
4 × 1 month vacation × 12 hours × 31 days	=	1,488 hrs.
		10,592 hrs.

Position calls for 17,520 hours; on duty 6,928 hours—or 39 per cent.

Night nurses—Off duty:

2 × 3½ hours per day × 365 days	=	2,555 hrs.
2 × 1 hour for meals × 365 days	=	730 hrs.
2½ days × 12 hours × 12 months	=	360 hrs.
2 × 1 month vacation × 12 hours × 31 days	=	744 hrs.
		4,389 hrs.

Position calls for 8,760 hours of service; on duty 4,371 hours—or 49 per cent.

Conclusion—
Head nurse cannot be considered in computing ratio of nurses to patients. Assuming that ratio as given is correct, the number of day nursing hours on a 90 per cent occupancy of ward is 5 nurses × 12 hours × 365 days or 21,900 hours. Night nursing hours are 2 × 12 × 365 days or 8,760 hours.

	Position	Covered	Per cent of Coverage	Ratio for Comp. Coverage
Head nurse	4,380 hrs.	1,828 hrs.	41%	2.44%
Day nurse	21,900 hrs.	8,611 hrs.	39%	2.59%
Night nurses	8,760 hrs.	4,371 hrs.	49%	2.04%

"People who think outside their heads, the whole process of whose thought appears, like Homer's, in the art of secretion, who tell everything that led them towards this conclusion and away from that, ought never to be with the sick."—Florence Nightingale.

SCHOOL OF NURSING WITH A REAL SCHOOL HOUSE

By ELIZABETH A. GREENER, Superintendent of Nurses, Mount Sinai Hospital, New York City

WHO ever heard of such a thing as a real school house for student nurses? Where are those pessimists who once invented that terrible bugaboo of the over-trained nurse which nearly frightened some of our poor timid medical brothers to death? And who dares today to say that nursing education is a myth and a failure?

So far as can be ascertained, Mount Sinai Hospital, New York City, is the first institution in this country to set aside and equip a substantial building which is used solely for the educational needs of a school of nursing. Indeed two splendid buildings, formerly used for hospital purposes, have been turned over to meet the immediate needs of the training school, one as a school building, the other as a home for graduate assistants. The close proximity of these two buildings to the main nurses' home is especially advantageous.

Nurses' Educational Building.

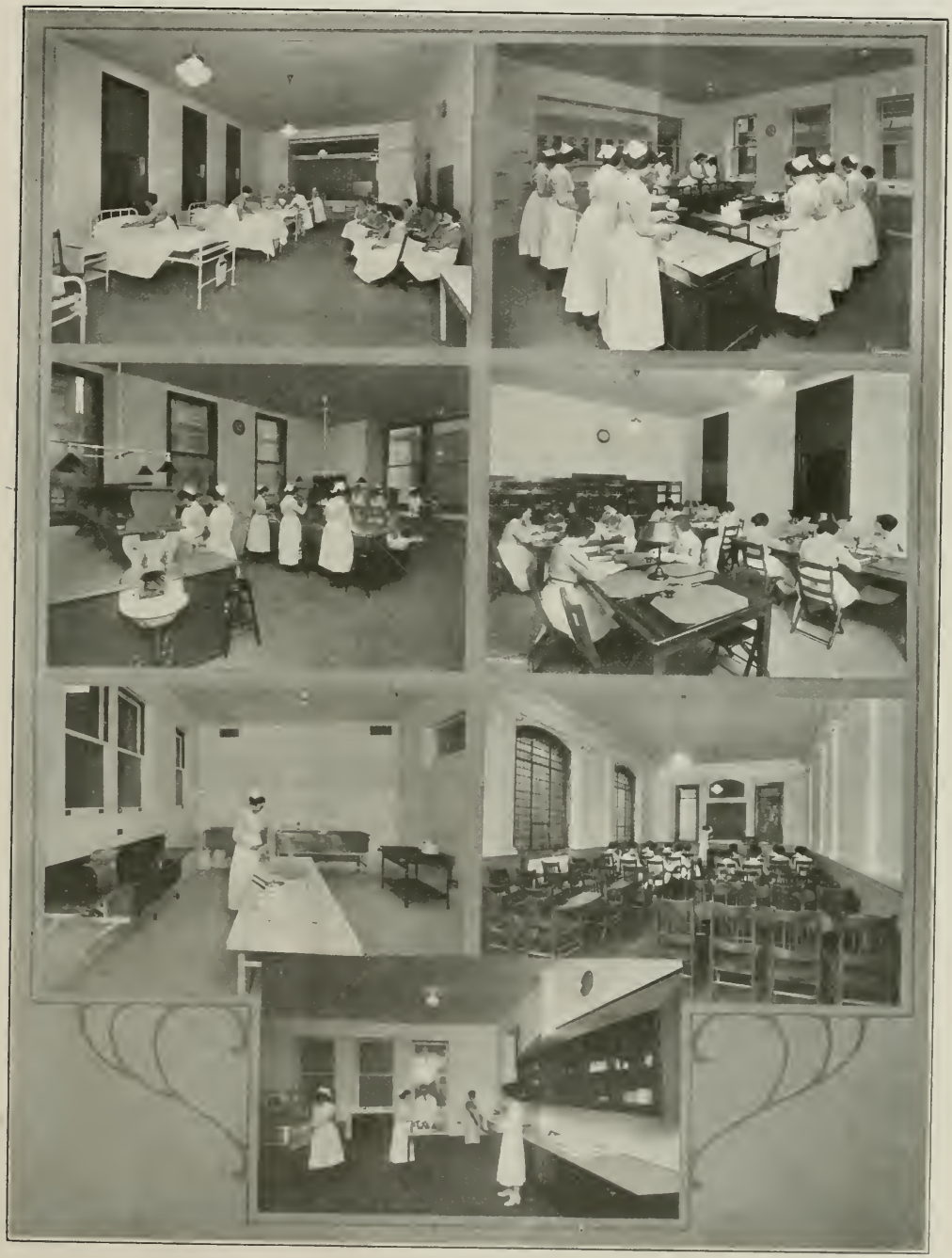
The structure which has been remodeled and equipped as a school was originally designed for research laboratory purposes (the hospital laboratory, by the way, has since been provided with a much larger building), and is a three story structure of stone and brick with large sunshiny rooms, high ceilings and tile or terrazzo floors throughout. It could hardly have been improved upon had it been originally intended for the purpose to which it has been adapted. The approach is through a sunny corridor with windows on either side, leading directly from the nurses' home.

The first floor is divided into two large lecture or class rooms, each of which can accommodate groups of from fifty to seventy-five students. There is a dignified entrance hall, with a small reception room at one side. One of the lecture rooms is devoted largely to the work of the instructor in sciences and is fitted with skeleton, manikin, Froshe charts, blackboards, balopticon and screen for the projection of pictures, and other useful class room equipment. The other is a more simple room, dignified in appearance and beautifully finished in oak with soft-colored stained glass windows. This is used for more formal purposes, largely for lectures given by the attending staff, etc. These lecture rooms are separated by the reception hall and vestibule, the main doors of which are beautifully decorated with heavy grilles.

The second floor is devoted largely to the use of the instructor in sciences. At the head of the stairs to the right is the study, containing a reference library of from three to four hundred volumes, all of which have been selected with direct reference to the needs of the school of nursing. Study tables with shaded lights are furnished for the use of the students. The instructor has a comfortable office across the hall which makes it possible for her to keep in close touch with students using this room and to direct their activities properly. In her office is all necessary equipment for efficient work, including, among other things, typewriter, desk, files, mimeograph outfit, large dictionary on standard, desk telephone, etc. Across the front of this floor is a well-lighted science laboratory, measuring 16-32 feet, with individual equipment for a group of twelve students. Opening from this science laboratory are two small rooms, one of which will be developed later for special scientific work. The other is used by the instructor as a special store and stock room. A lavatory finished in Italian marble is conveniently placed on this floor, and there is a sanitary drinking fountain at the left side of the corridor.

To the average visitor, the third floor probably presents the most attractive appearance of all, as

GLIMPSES WITHIN THE NURSES' SCHOOL HOUSE AT MT. SINAI HOSPITAL



Underwood & Underwood.

the entire front of the building is developed into what appears to be a beautiful, sunshiny ward with five adult beds, also a crib and a bassinette for use in teaching children's nursing. Practically everything used on the ward is to be found in this beautiful demonstration room for student nurses. A utility room opens from one corner and this, too, is fitted up in every particular to duplicate a utility room in the general hospital, so that the nurse may be taught the use and care of the many articles that she will need there. A stretcher, complete surgical dressing carriage, and three Chase dolls are also furnished for this department. Opening from the left of the demonstration room are two supply rooms fitted with closets, one modeled after the linen rooms in the wards, the other a special supply closet in which all material and equipment used for treatments may be found, such as special baskets, trays, and other articles required for teaching purposes are kept in these closets and in every case they duplicate the equipment which is to be found on the wards. Behind the demonstration room is a smaller classroom used solely for teaching bandaging and for keeping all necessary supplies for that purpose. Across the hall from the bandage room is the office of the instructor of practical nursing. One side of her office is built up solidly with large supply closets for keeping extra material required for her work.

A description of our nurses' educational equipment would hardly be complete without a word of description concerning the new domestic science department and classrooms which have just been opened in one of the new hospital buildings. It did not seem to be either desirable or practical to have classes in domestic science, dietetics or cookery conducted in any section of the hospital except one closely and intimately related to the actual dietary center where the instructor of dietetics could conveniently supervise all such work without being taken too far away from her own department. These class rooms are in a section of the new children's pavilion. One is a domestic science or cookery class room, fitted with individual equipment for twelve students, another a class room for theory. The milk room is on the far side of the domestic science classroom and the large special diet kitchen of the general hospital just across the hall. The dietitian's office is at the end of this suite and commands the whole department. All the rooms are bright and beautiful, on the south side of the building where they have sunshine all day long.

The second building, which was recently turned over to the training school, has been remodeled as a residence for the sole use of a group of supervisors and head nurses. Twenty-two officials can be accommodated in this building and many of the number have rooms with individual baths. The student nurses promptly named this building "The White House" when they discovered that the assistants were to live there.

In addition to three suites of bedroom and bath on the first floor of this building are two small, cosy reception rooms in which the nurses have the privilege of receiving their friends. There are also a wonderfully equipped laundry and kitchenette, and the homelike atmosphere makes the nurses feel that they are actually keeping house in their own home. The building, which is a four-story one with different sizes and types of rooms, makes it possible suitably to accommodate the different groups which it houses. Like the educational building, it is of brick and stone; ceilings are high and the rooms bright and sunny.

On the fourth floor is a large front room, extending the full width of the building, with windows on three sides, which is used as a recreation room or sun parlor. In this room, in addition to the regular furnishings, are a victrola, sewing machine, card tables, etc. Nothing has ever been done for the graduate nurses of the school that they have appreciated so greatly or enjoyed so much as the use of this building which they have entirely to themselves. It gives them opportunity for rest and freedom away from the constant observation of the student group, a real home where they may be free from constraint and where, as one member of the group naively remarked, they could either burn toast or cook onions without unpleasant comments or consequences.

STAFF ONLY MAY ADMINISTER RADIUM

Only staff physicians at the Mayo Clinic, Rochester, Minn., are allowed to apply radium. Dr. H. H. Bowing, head of the section of radium and x-ray therapy of the clinic, believes such a ruling absolutely essential.

"The many discouraging reports circulated today regarding radium therapy, in all likelihood, are due to the negligence of the physician in charge as well as to the many physicians who buy small quantities of radium and apply it without the necessary experience," says Dr. Bowing. "It would be folly for a medical hospital to purchase a complete set of surgical instruments and equip an operating room and then ask the staff to practice surgery. It is only slightly less absurd in radium therapy. The physician who purchases radium is given to believe that the art of its application can be acquired in a short time."

Dr. Bowing believes it essential for the proper administration of radium that a physician on the hospital staff be designated as responsible for every phase of its therapeutic application. Only through consultations with other members of the staff should treatments be given. The physician should be privileged to study at various centers where large quantities of radium are used.

The Curie Hospital in Rochester contains thirty beds. It has more than two grams of radium and four standard x-ray machines for therapeutic purposes. The nursing staff removes the radium and prepares the applicators.

CITY OF MANNHEIM CONSTRUCTS THOUSAND BED HOSPITAL

By CITY ARCHITECT PERREY, Mannheim, Germany

DURING the first two decades of this century, hospital construction in Germany passed through an important stage of development, characterized by a fundamental change of conception corresponding to the modified ideas gaining ascendancy in the various fields of medical science.

In the middle of the last century, the corridor system was regarded as the most suitable for hospitals; all the wards and subsidiary rooms, that is, opened into common corridors. In large plants in which it was found impracticable to have all the rooms in a single building, several separate structures connected by corridors were erected. The main characteristic of this system was thus a direct or indirect connection of the atmosphere of all the rooms. The advantages of such plants were: the avoidance of unnecessarily long distances; protection of the patients and the personnel against inclement weather in passing to and fro within the institution; and ease and rapidity in caring for patients and supplying their needs. The main disadvantage was found to lie in the danger of transmitting infectious diseases.

Unit System Supplants Corridor

The outstanding progress of medical science in this particular field led, toward the end of the nineteenth century, to the rejection of the corridor system and the adoption of a system directly opposed to it; namely, a complete breaking up of an institution into a large number of entirely disconnected buildings or units. As the most perfect example of the new system I may mention the Hamburg-Eppendorf hospital, which was completed in 1889 and contains more than seventy independent, disconnected units. The evils resulting from the transmission of infectious diseases were entirely abolished by this system. But in their place a great number of other evils soon made themselves manifest. As the various units composing such a building complex had to be erected at a sufficient distance apart to secure proper lighting and an adequate supply of air, it was found that they covered an unusually large extent of territory. Thus the distances that the patients, and more particularly the attending personnel, had to traverse were much increased. The hospital personnel, and especially the physicians, were obliged to cross in the open from one building to another, thereby exposing themselves to all kinds of weather, during our often very severe winters, and running great risk of taking cold. Another difficulty arose from the inconvenience of providing the patients with warm meals. At the beginning of this century, the conviction was reached that it was not necessary to distribute the patients among so many buildings; that, moreover, the proper solution would doubtless be to unite the advantages of the two systems and to apply the corridor system to all non-infectious diseases and the pavilion system to the infectious diseases. And since the number of patients with infectious diseases

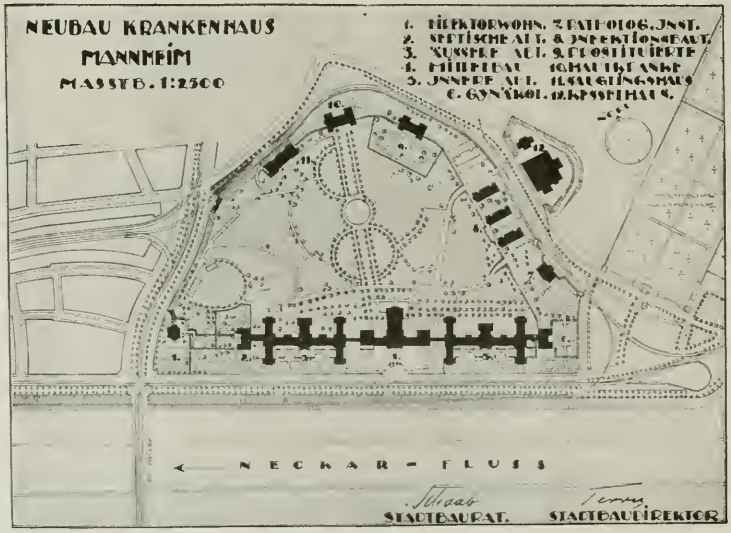
A comprehensive view of the Mannheim Hospital.

proved to be in the minority, the application of this compromise system made it possible to house the greater part of the patients in buildings of several stories, in which the corridor system was reestablished, while a small number of pavilions were erected for patients with infectious diseases and for other patients whose isolation for various reasons seemed desirable.

Then, again, the conflicting views with regard to limitations in the size of hospitals became clarified, and the opinion gained ground that it was not advisable to build hospitals of immense size, since the difficulties of a uniform management from an administrative and technical point of view, as well as from a medical standpoint, are thus vastly enhanced. Consequently, in recent hospital construction the number of beds in a hospital has not usually exceeded 1,500, in contrast with the institutions founded toward the end of last century, containing from 2,000 to 2,500 beds, or even 4,000 beds, as is the case with the Heil- und Pflege-Anstalt located on the Kahlenberg in Vienna.

Mannheim Hospital in Park

This was the state of affairs, as regards hospital construction, when the city of Mannheim in 1908 took the preliminary steps in connection with the erection of a large new hospital to contain 1,000 beds, with a possible increase to 1,300 or 1,400 beds. The question of a suitable site for such an institution is a very important one. In Germany it is generally assumed that at least 100 square meters of building space should be allowed for each hospital bed, and, when possible, the endeavor is made to go beyond this norm. In Mannheim it proved possible to utilize for this purpose a large park with some fine old trees. The park, containing 172,020 square meters, is immediately contiguous to the Neckar, a branch of the Rhine, and is only one and a half kilometers from the center of the city. It fronts the south and the Neckar valley for a distance of 600 meters. The broad river front and the size of the park made it possible to arrange the buildings in such a manner that privately owned buildings could only be erected at considerable distances from them, which is a very important question in selecting a site for a hospital. Of no less importance in the choice of a site for a hospital to be erected in a manufacturing city is the prevailing direction of the winds. The hospital must be so located that smoke and injurious industrial gases do not reach the premises. This prerequisite was also secured for the Mannheim hospital grounds. In keeping with the above-mentioned features of modern hospital construction and taking account of the location and shape of the building site, a plan for the arrangement of the buildings was worked out and is shown above. On the river front, facing the south, are the three main buildings, connected with each



Plan of the Mannheim Hospital.

1. Residence of the superintendent.
2. Department for septic cases.
3. Department for external diseases.
4. Main building.
5. Department for internal diseases.
6. Gynecologic department.
7. Pathologic institute.
8. Pavilions for infectious diseases.
9. Pavilion for prostitutes.
10. Pavilion for cutaneous diseases.
11. Infants' pavilion.
12. Boiler room.

other by corridors—some open, some closed. The central building contains no wards; but only the offices of the administration department and such rooms as are necessary for the handling of patients. To specify, these are: (1) admitting rooms; (2) main entrance through which all must pass who enter or leave the hospital; (3) administration department; (4) pharmacy; (5) main kitchen; (6) main bath; (7) room for holding meetings, various ceremonies and religious worship; (8) entertainment hall and apartments for nurses; (9) casino and apartments of physicians, and (10) a number of well-arranged apartments for married employes.

The main entrance is an imposing one

Adjoining this central building on the left and right are the two main buildings for internal and external diseases. Both buildings are three stories high, with wards of varying size opening into long corridors. The wards consist, in part, of rooms containing from one to seven beds, all having southern exposure; in part of larger rooms containing sixteen beds each, with windows on both sides toward the east and the west. The laboratories, examination rooms, operating rooms and bath rooms are located on the north side of the corridors. In wing additions adjoining these two main buildings are certain special wards; next to the department of external diseases is the ward for septic cases and for eye and ear patients, and next to the department for internal diseases is the ward devoted to gynecology. By this plan it was possible to distribute the majority of the beds throughout these two main buildings, there being 742 beds in 160 rooms, all intended for patients with non-infectious diseases. For infectious and other special cases the pavilion system is employed.

In order not to destroy the uniformity of the large park, which will constitute a pleasing feature of the new hospital, the pavilions were located at the rear edge of the park, there being four one-story pavilions (with projecting attic story), for measles, scarlet fever, diphtheria and whooping cough, respectively. For the present, only three of these pavilions will be erected. There is a special pavilion for prostitutes, and another for scabies and venereal disease cases in men. There have been added a pavilion for sick infants and a laboratory of pathology with dissecting rooms. The morgue and undertaking rooms complete the equipment.

The residence of the superintendent is placed at the western end of the park, far removed from the hospital buildings. The boiler rooms, laundry and disinfecting establishment are located off to one side (toward the east), so that the smoke from the chimney does not affect the hospital buildings or the park grounds.

In the above-mentioned pavilions there are 253 beds, distributed through sixty-three wards; in addition, the special pavilion for infants has thirty wards and 116 beds, making altogether 253 wards with 1,111 beds. Certain provisions are made for extensions by finishing off attic rooms and by wing additions. In this manner, space for sixty-one more wards with 291 additional beds may be secured, so that, after the whole plan of the institution has been developed, there will be 314 wards with 1,402 beds. According to present views that is the maximal number of beds a modern hospital should have.

From the large number of wards in comparison with the number of rooms, it will be seen that an endeavor has been made to avoid housing too many patients in one ward. The ideal would probably be to have no more than one or two beds in a room, but unfortunately financial restrictions prevent the realization of such an ideal for the present, for it has been noted from actual computations that building costs increase very rapidly with the decrease of the number of beds in a ward. The personal expense to patients would, of course, have to be materially increased with the decrease in the size of the wards. For these reasons, wards with from thirty-two to forty beds were formerly built in Germany, but in the institutions recently built this idea has been abandoned for the reason that such a huddling together of patients has come rightly to be regarded as ill advised. The plan adopted for our institution of having a large number of wards of varying size makes it possible to segregate the patients according to social status or from any other point of view.

Another important question, besides the size of the wards, is the method of housing the hospital

personnel. In the nature of things, it is necessary that, as far as possible, the personnel shall reside in the institution in order to be available at all times. The carrying out of this idea adds quite materially to the cost of modern institutions, especially since not only sleeping rooms for the personnel must be provided but also sitting rooms and entertainment halls. The skill of the architect is called sharply into play in order that certain parts of a building which are not suitable for patients but are otherwise unobjectionable may be utilized for these purposes. This idea has been carried out to the fullest extent in the Mannheim hospital. All the rooms in the rear overlooking the park, as well as all the attic rooms not needed for other purposes, are finished off for the personnel, and in this way sitting rooms and sleeping rooms for 367 persons were obtained. There are also many employes who live outside of the institution. The required personnel for our institution has been estimated to be 413. This seems a high figure, but it accords with the general estimate based on common experience. On an average, we figure in Germany on one member of the personnel to 2.54 patients, which includes of course the kitchen personnel and all those who are employed to keep the building clean. Many institutions go far beyond this estimate, employing at times one member of the personnel for every 1.52 patients.

Outstanding Features of Plan

Among the more important features of the institution, the following may be briefly mentioned:

In the central building is located one large main kitchen (147.18 square meters of floor space), with facilities for cooking with steam or gas. From here food is taken through the rear corridor to the lifts and thus transported to the twenty-four serving kitchens of the adjoining main buildings. Food for the pavilions for infectious diseases is carried on well isolated food trucks. Adjoining the main kitchen are the scullery, the pantry, the meat-cutting room and the large storage rooms; also numerous rooms for the personnel.

In another large room (230 square meters) in the central building is the department for roentgen-ray treatment. Over this is the main bath hall with facilities for therapeutic baths of all kinds. Owing to their central location, the roentgenographic department and the baths may be readily utilized by out-patients. In the building for external diseases, the operating rooms are worthy of attention. They face the north and have a floor space of 56.17 square meters. Between these two rooms is the large sterilizing room. In the operating rooms an equable temperature is assured by the distribution of the heating apparatus over the walls, ceiling and floor. The walls are perfectly smooth, being covered with glazed tile (size, 50x50 cm.). The operating rooms contain nothing besides the operating table and scrub-up sinks for the surgeons. Heating and illumination are from without. There is an additional operating room for septic patients in the department for septic cases. In the department for internal diseases, the laboratories, which are unusually large, are worth noting. Altogether, there are twenty-four rooms with 440 square meters floor space devoted to this purpose.

The ordinary ward with sixteen beds has double windows on both sides. Heated fresh air is brought in through the window recesses. The vitiated air is expelled by electric ventilators. Adjoining each operating room is an isolation room for turbulent or moribund patients; also a small examination room, a bath, lavatory, toilet and *loggia*.

Isolation is Complete

In planning the pavilions for infectious diseases, great importance was attached to preventing the patients from coming in contact with other persons. No one can enter them unless admitted by the nurse in charge. Food is handed in from outside. In the pavilion for scarlet-fever patients, in view of the marked contagiousness of the disease, a special disinfecting bath is prepared for patients who are dismissed. In one room, the patient lays aside his hospital garments when the bath is entered. After bathing he enters another room, where he puts on his disinfected street clothes. From this room he leaves the ward without coming in contact with other patients. The pavilion for sick infants awakens considerable interest attached to protecting the patients from drafts, and at the same time securing the opportunity of keeping the infants out in the sunshine when the weather is fair. The pavilion contains 116

The infants' pavilion is a five-story structure

The pavilions for infectious diseases are located at a distance from the other buildings

beds, which are disposed in groups of six. For each ward there is a bath room, and between the bath room and the ward there is an anteroom. The wards are separated from each other and also from the corridor by glass partitions, so that the wards are well lighted and can be easily surveyed. On the south front the front walls of the outside rooms of the upper stories are set back, thus providing space for terraces and balconies of great extent. These give the infants the benefit of fresh air and sunshine.

The space at my disposal will not permit me to describe in detail the technical arrangements, which are the best and the most complete that modern hospital construction affords. A detailed description must be reserved for a special article, but I will endeavor to sketch a few of the features. All the wards are heated by the hot water system; the rest of the rooms have low pressure steam heat. In addition there are also steam and hot water systems for general operations carried in kitchen, laboratories, baths, etc., as these are in use the whole year round. There is hot and cold water in almost all the rooms, and wherever needed there are gas connections, electric illumination, power current for other purposes, and low current for electric signals and bells. In all the buildings, there are electric bed, food, and passenger lifts, so that patients who cannot walk can be readily transported to any part of the building. All the connections are located in a tunnel, which extends around the whole tract. This is used also for the transportation of corpses.

The buildings are solidly constructed throughout. The ceilings, which are of iron and cement, are made sound-proof by thick layers of sand. All the floors are covered with linoleum, the walls being channeled out to allow the linoleum to extend up 13 cm. at the sides. As the corners of the rooms are also rounded out, there are no hollow corners in the wards that are so hard to keep clean. The serving kitchens, bath rooms and some others have terrazzo floors. Bathtubs and lavatory fixtures are made of fire-clay. Staircases are of artificial stone, likewise with rounded-out corners. Smooth, veneered doors have been used, since panels tend to catch and hold the dust. The wardrobes are concealed in the walls for the same reason. As protection against the sun, sliding blinds are used. Venetian blinds and all similar arrangements were studiously avoided, as they catch the dust. A special type of toilet, the so-called *consolcloset*, has been installed. This toilet, when not in use, may be clapped back into the wall, affording a better opportunity of cleaning the floors. The lavatory arrangements for patients are peculiar. Detached wash bowls were decided upon. The bowls are numbered to avoid confusion, so that each patient may use only his own bowl. The bowls, when in use, are placed on consoles made of fire-clay. This arrangement lessens the chance of transmission of disease. For the same reason a type of steam dish-washing apparatus is used in the serving kitchens, in which boiling water may be utilized to sterilize the dishes. Surfaces of the wall that are subject to damage from water are covered with glazed wall-plates. For wall surfaces exposed to any unusual amount of wear, as along the staircases, a lead and oil paint was used. Otherwise, for the walls and ceilings, a washable mineral paint, *"Basaltine,"* has been employed so that, in the presence of infectious diseases, they may be cleansed with soap and brush and disinfectants without injuring the surface.

From the foregoing description it will be seen that the Mannheim Hospital is a most modern institution from a constructive as well as a hygienic standpoint. The architect, who is, at the same time, the writer of this article, will be pleased to conduct through the plant any architects from the other side of the ocean who may happen to visit Germany.

HOSPITAL OBSERVES ANNIVERSARY

Founded as a memorial to the victims of the Johnstown Flood, the Conemaugh Valley Memorial Hospital on February 22 celebrated its thirteenth anniversary.

The hospital is the direct successor of the Red Cross Field Hospital established in Johnstown a few days after the great disaster which occurred on May 31, 1889. Immediately following the flood the Philadelphia branch of the Red Cross entered the city and erected numerous tents for the care of the sufferers. Soon a temporary wooden structure was completed. The present hospital, erected as a memorial, was ready for the reception of patients on February 4, 1892.

At a banquet and program which marked the anniversary celebration, the present needs of the institution were announced. An appeal was made for the erection of a new wing to the hospital proper, the installation of a modern pathological laboratory and the completion of the nurses' home now under construction.

HOW TO INTEREST DOCTORS IN THE SOCIAL TRAINING OF MEDICAL STUDENTS

By EDNA G. HENRY, Department of Social Service, Indiana University, Indianapolis

IT IS doubtful if anything except his own social training as a medical student will interest any physician certainly and permanently in such education. His attention may have been attracted to it by some unusual intern who had been well taught. He may have seen the value of it by being associated with medical students who were getting it. The demands of some large free practice within or without a medical institution may have made him feel the need of it either for himself or for others. Or scholarliness joined to the best scientific skill may have caused him to see the reason for it and the answer that it might be for the modern physician.

"This is the way of salvation—to look thoroughly into everything and see what it really is, alike in matter and in cause; with your whole heart to do what is just and to say what is true; and one thing more, to find the joy of life in heaping good on good so close that not a chink is left between." When Marcus Aurelius said these words so long ago he could hardly have been thinking of medical men and their connection with social work. But we can see in them, as Miss Henry has pointed out, the goal toward which the doctor interested in social work is progressing, the demand of the public for medical men more aware of their patients' full lives and of all ways to save them.

Perhaps these scholarly men are the only ones who beg for such teaching for students. Perhaps they seem to have forced it upon their followers and their colleagues. But this is more fair than it appears. Education is the one commodity which it is not only allowable but necessary to offer before there is a demand for it.

When the initiative has been taken by the scholar and the instruction offered, other men will be won to it by the result of that instruction upon the students and by the character and ability of the people giving it.

This means that the medical institution in which the students work must have a good medical social service department which practices what it preaches. The teacher of the new subject, for the present at least, must be a social worker, not a physician. But this instructor must be, if a woman, not a handmaiden to the doctor, nor a meek servant of the medical man, but an expert in her own line. Because she knows more than the doctor of her own business, she will respect him the more thoroughly for his knowledge of an older and larger field.

Actual antagonism to such teaching dies at once upon acquaintance with such a department and such a teacher. It expires with the mere knowledge of what such teaching hopes to give.

No one with sense wants to make a social worker of a medical student. With each year the modern physician grows more and more away from that early if valuable type of man who was the sole doctor, father-confessor and social worker of his community. Yet year by year life becomes more difficult, especially for the general practitioner who knows nothing of the social complexities of modern life, of its increasing industrial control, of the institutions and resources and social laws of his state.

It is only the question of education as stated by Spencer and by Montaigne. This youth needs to know what to do, and how to do it, when he becomes a man. This particular youth intends to be a doctor when he is a man. Therefore he needs to learn, both how to be a good one and what his job as a doctor will be.

It is in helping to answer the second query only that his new teacher can help him.

He can be told nothing about the mysterious machinery of medical institutions. He is studying medicine. During the process he probably will acquire more knowledge of the hidden peculiarities of hospitals and dispensaries than is in the possession of their own superintendents.

He is going to practice medicine and he will practice it for a generation which daily values health more and doctoring less. If he is to live, he will have to learn, not only about disease, what health is, and how to recover it, but how to produce it and how to teach people to get and to hold it.

In order to do this, he must know men, not only their bodies, but the relation of those bodies to each other, to spirit and to environment. He must know not only the whole man but the unit of which he is a part. He must learn not only what is the matter with his patients stomach but what in his life may have made it what it is and what elements of normal life which might restore it are missing.

He must know, not only from a medical, but from a social, point of view, what a normal life is, and what various divergencies from it there may be. Especially does he need to know which of these divergencies are due to disease and which create or increase it. Most of all, he must know what is his own problem. What is the chief cause of death? Is the cause of that cause physical or social, or both? What is the greatest cause of illness? What creates business for the doctor? Which is the more profitable, the more worthy type of the business, curing or preventing? What are the social aspects and results of heart disease and what of tuberculosis?

He should know what social problems are the product of disease. What germs make orphans? What creates the most widows, tuberculosis or industrial accident—or war? Which is more responsible for idle men, financial depression or syphilis? What disease breaks up families? What social conditions increase illegitimacy? Does illegitimacy affect child welfare? In how far is the doctor his brother's keeper?

These questions and some of their answers may be set forth in lectures. Lectures, too, can tell him of the laws, institutions, resources and needs of his state.

But he needs case work too. He learns medicine by it. He sees the patient in the hospital, but in the hospital he does not see the patient. There the patient is clean, dressed, sober, fed and comfortable.

He cannot be expected to guess that the Madonna-like mother of his nicest baby will feed it figs during its first day at home, or that his favorite patient, an old and witty Irishman with myocarditis, lives on the fifth floor with a son who beats him regularly.

Even in a dispensary he may not learn why patients refuse to go to a hospital. One patient's child died there, another cannot get morphine, and a third does not dare to leave her husband. He may not find out that the Roumanian woman failed to return Saturday because she had to care for the altar flowers on that day, and that the patient with a mitral lesion was worse because there was no one else to lift or wash for his crippled wife. In discovering such facts he will train his imagination to work later in caring for his own patients.

Should Have Contact with Social Service

He needs to know all this and more as he enters a profession his success in which will depend upon a combination of scientific knowledge and the missionary spirit. He needs to have early implanted in him faith and altruism. This can be done no better than by placing him in contact with a good social service department so that he can see the social back grounds of all his medical problems and himself render daily service in decreasing all misery as well as sickness. There should then be added definite instruction by some wise and obstinately optimistic or far-seeing social worker.

A social service department, or in time professors of medicine using material gathered by it, may thus by lectures and supervised field work make of the student, not a social worker, but a better doctor.

He will be the one later to further progressive legislation or to win fame by showing a way in which all men may profit by medicine. His town will know that a lot of its sickness and misery, among rich and poor alike, is unnecessary. He will be not only a great doctor but a citizen alert about bad housing and bad motives as well as bad hearts.

Never will he treat only an eye or examine only lungs. He will want to know all that has made the man what he is, and all that may be needed both to make him better and to prevent repetition of his suffering in others.

Doctors Must Use Sociology

"By their fruits ye shall know them." Those who are interested in the social teaching of medical students, those who are convinced of its value, argue little. They teach and await the future. More than one state now is dotted here and there with medical men who have had blind spots removed in their student days. And if the blind spots were removed, they need no further argument. For the present, the undebated question lies in the hands of a few leaders and scholars in sociology and in medicine. Soon the present students will compose the majority of their profession in their localities. Meanwhile those who believe in such instruction must see to it that new medical men able to use this knowledge for the progress of medicine are created and that the non-medical instructors are sociologists, not sentimentalists, path-finders, not followers. At all times they must be persons who can command the respect of the thinkers and doers of the greatest profession in the world.

Medical men themselves must decide in what way the new profession of social work or the rapidly developing science of sociology can serve their purpose. Even as they seized upon chemistry and biology, so must they seize upon sociology. The power of medicine has grown out of its willingness, nay its eagerness, to take for its own purposes the knowledge made available by

each new science. Medicine itself must decide this. And it may be that if the power of the past has been in this, the future may depend in part upon the profession's ability still to recognize and to use new knowledge.

To the non-medical mind the growth of sociological knowledge means little as yet but that it must be added to the content of the educated man's mind. No matter what his calling, be he lawyer, doctor or employer, he soon will not be educated unless he does make this knowledge his own.

There are some who ask if this education may not point the road the profession must find if it is to justify its continued existence and exaltation. No educated man denies one iota of its greatness to medicine. But no educated and humane person today believes that the blessings of medicine are sufficiently in use, understood or available. May the possible improvements in the present situation be pointed out, not by the ignorant layman or the well-intentioned social worker, but by some medical man taught in his youth by great doctors, working with thoughtful sociologists?

Meanwhile those who carry forward the work have no argument for convincing others. These must come to see it themselves out of their own experience, or their own need, or wait until time settles the question.

The demand of the public therefore, for medical men more aware of their patients' full lives and of all ways to save them, but calls for what the doctors themselves want when they demand help from all knowledge, from every flower that blooms and every tree that grows.

And what they both seek will but give to the doctor what Marcus Aurelius long ago desired for all men.

"This is the way of salvation—to look thoroughly into everything and see what it really is, alike in matter and in cause; with your whole heart to do what is just and to say what is true; and one thing more, to find the joy of life in heaping good on good so close that not a chink is left between."

COOK COUNTY HOSPITAL FARM NETS $14,000 IN SINGLE YEAR

How distinct an asset the farm can be in connection with a public hospital is evidenced at the Cook County Tuberculosis Hospital at Oak Forest, Ill. Henry L. Bailey, general superintendent of the infirmary, has prepared for THE MODERN HOSPITAL the following data based on farming operations at Oak Forest during 1921:

"Our cultivated acreage during the season consisted of 150 acres of oats, 120 acres of corn, 75 acres of hay, 10 acres of alfalfa and 92 acres devoted to the growing of various kinds of vegetables.

"The principal items of the season's harvest consisted of 6,480 bushels of oats, 2,800 bushels of corn, 85 tons of hay, 67 tons of straw, 3,700 bushels of beets, 29,000 heads of cabbage, 3,500 bushels of carrots, 2,900 bushels of tomatoes, 900 bushels of potatoes, 600 bushels of onions, 1,700 bushels of parsnips, as well as numerous other varieties of garden vegetables.

"During the winter months our greenhouse produced 1,162 cases of lettuce and 153 bushels of cucumbers.

"In addition to the above, fresh pork to the amount of 49,352 lbs., fresh mutton 2,314 lbs., dressed poultry 4,048 lbs., fresh eggs 1,688 dozen, and goats milk 2,506 gallons were furnished to the institutions.

"The total value of these products, based on current Chicago produce market quotations on dates of delivery, was $36,496.77. In addition to this we had on hand at the close of the fiscal year December 1, 1921, live stock consisting of hogs, sheep, goats and poultry, with a market value of $14,172.63. Our total operating expenses for the year were $23,700.00, leaving a net income of approximately $14,000.00.

"In connection with the institution the County operates an extensive greenhouse, where cabbage, tomatoes, pepper, cauliflower seed, etc. are propagated and transplanted to hotbeds on the outside to harden until time for transplanting to the field. Our expenditures for garden seeds last year amounted to the sum of $696.00.

"There are also operated during the hatching season several large incubators for the raising of young chicks, ducks, etc. Turkeys and geese are also raised annually and kept on the farm.

"Our dairy operations are limited to a herd of thirty-three goats of the Toggenburg breed. These goats last year supplied 2,506 gallons of milk, which was furnished principally to the children in our tuberculosis hospital.

"Through an arrangement with the Rock Island Railway Company we have a comparatively inexpensive means of obtaining large quantities of fertilizer for our farm lands. Many of the west-bound empty stock cars of the company are switched to our sidetracks for cleaning, and the only expense in connection therewith is the labor incident to cleaning out the cars and spreading the fertilizer on the land.

"In a large institution of this character, handling as we did during the year just closed a grand total of 7,500 patients and employes, there is of necessity a large accumulation of garbage from the kitchens and dining rooms. This garbage is systematically separated, and that portion suitable for hogs—of which we usually maintain from 500 to 600 head—is put through a boiling and sterilizing process and served to the hogs in a warm condition both winter and summer. Table waste, such as bread crusts, is ground up and served to the fowls, so that the actual waste is reduced to a minimum.

"Our regular farm labor is augmented by the services of about twenty men who are detained here through court process. The only expense in connection with them is their maintenance, consisting of board and clothes. This arrangement also serves to reduce operating expenses to a considerable extent.

"Thus it will be seen that the particular advantages we enjoy in obtaining a maximum amount of labor at minimum expense, low cost of fertilization, and an efficient system for the utilization of available garbage, all contribute toward making the farm a valuable asset to the institution."

Disease is a retribution of outraged nature.—Hosea Ballou.

PIONEER INDUSTRIAL HOSPITAL OF CAMBRIA STEEL COMPANY HAS NEW PLANT

By JOHN B. LOWMAN, M.D., Chief Surgeon, Cambria Steel Company, Johnstown, Pa.

WHAT has been pronounced by many who have inspected it as the finest industrial hospital plant in the country has been completed recently at Johnstown, Pa. by the Cambria Steel Company for its employes.

The hospital was opened for service July, 1921, and has accommodations for eighty beds—four wards and nine private rooms. The building covers approximately 16,500 square feet. The central administrative bay is four stories high including basement, and the two wings three stories.

The original hospital, a pioneer of its type, was built in 1887 under the direction of Dr. Webster B. Lowman, surgeon of the Cambria Iron Company, and was a frame structure with twelve beds. This was the first hospital ever operated by an industrial corporation, and from it similar enterprises in other localities had their incentive.

The great benefits derived from this hospital required the addition of many departments, until in 1919 the cost of maintenance demanded the necessity for a more modern building adapted to the best surgical work of the day.

Cambria Steel Company through its president, Mr. A. A. Corey, Jr., and under the direction of the chief surgeon, Dr. John B. Lowman, decided to erect a new building which would be in the line with the best modern hospitals in the country. The hospital staff and the engineering department were authorized to study prevailing practices in the newest hospitals. Representatives therefore made complete inspections of such existing installations, and the result of their studies is embodied in the new building.

It was found desirable to separate the nurses' quarters from the hospital department, and therefore a nurses' home in a special building was authorized as part of the construction. After the plans had been properly discussed and the general working layout agreed upon as the best obtainable, the work was handed to Mr. Benno Jansses, architect of Pittsburgh, with instructions to furnish designs for both a hospital and nurses' home. The contract was awarded to Mellon Stuart Company of Pittsburgh who finished the building according to time and specifications.

The new hospital building of the Cambria Steel Company at Johnstown, Pa. This company claims the distinction of erecting the first industrial hospital in the country.

The nurses' home is adapted for housing thirty nurses, and as pictures and prints show is complete in every detail. The first floor is devoted to reception rooms, private and public sun porch, toilets, lavatories, laundry and sewing rooms. The second and third floors are given over to

From the front door the visitor gets this view of the attractive lobby.

A well equipped operating suite is on the second floor.

Private rooms are tastefully and conveniently furnished.

private rooms equipped with baths, toilets and lavatories, private and general; on the roof is an open-air garden.

The hospital is of fireproof construction throughout, the walls being of red brick, the frame and floors of reinforced steel, the partitions of gypsum, and the roof of slate laid on concrete slabs. Trimmings are of Ohio marble. All floors are finished in terrazzo except those of the private rooms which are hard maple. The bases are terrazzo coved and have been set flush in plan and elevation.

A typical ward at the Cambria Steel Company Hospital.

In the basement wings are the machinery sections, and in the center basement are located the main kitchen, refrigerators, nurses' dining room, and storage rooms. On the main floor of the north wing are the receiving rooms and outpatient department. In the south wing are the private patient rooms, and in the center bay, the superintendent's suite, main office, doctor's office and two large reception rooms for visitors. Spacious halls add to a pleasing interior.

On the second floor wards are located in each wing, also a special ward in the administrative bay all equipped with diet kitchens, sterilizing rooms, nurses' stations, recovery rooms, patients' clothes' rooms, lavatory and bathrooms of the best sanitary type. The operating suite, the laboratory and x-ray department are also on this floor.

On the third floor are located an open air solarium, enclosed solarium and gymnasium; also a room for a McKenzie reconstruction outfit, occupational therapy and massage work is found.

The building is equipped with a modern elevator with double exits, an enclosed fireproof stairway which runs from basement to third floors, two enclosed fire escapes, and one outside fire escape. Each floor is equipped with fire pressure system and hose connections fed from the water lines of the company. The building is also thoroughly equipped with fire extinguishers. The heating system is direct steam, high pressure type, from the main boiler plant of the Cambria Steel Company, the pressure being reduced to service required by a control unit at the basement entrance.

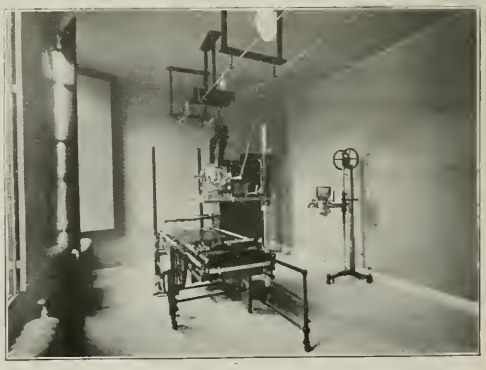
Equipment is Up-to-Date

Every room and every department are equipped with a vacuum and a plenum system of ventilation which permits the temperature of the hospital to be the same rating throughout.

The drinking water is sterilized, filtered and ice-cooled by a Forbes sterilizing plant in the basement, then circulated to drinking fountains in all parts of the hospital.

An ice machine which makes ice for general hospital use has a brine circulating system for cooling the refrigerators on the different floors.

Electric lighting and power are furnished by the Cambria Steel Company, and are of both AC and DC type, modifications in phase and voltage being possible by a necessary motor generator and transformer. Both phase and voltage may be controlled by works or city service, each available at all times.



The x-ray department of the hospital has complete equipment.

The modern type of steel cupboards, closets, blanket warmers, lockers, etc., which calls for built-in construction, has been installed so that no corners or dust-gathering shelves are found in any part of the hospital from the basement to the top floor. The halls and stairways show flush walls and no projections, all door bucks staying flush with walls even at sill entrances.

Connection With First Aid Stations Close

In addition to the nurses' home and hospital, which have been newly constructed, there are quarters for the laundry and help, newly renovated and adapted for service in accordance with the latest ideas. The hospital can be reached from all departments of the company by direct telephone connection. Ample ambulance service is also available, and a complete staff of surgeons and nurses is always on duty.

The hospital is located near the Pennsylvania Railroad station on a hill known as Prospect, and is within ten minutes' ride of the farther point of the works.

The flexibility of the system is such that in case of emergency 100 patients can be cared for, and in ordinary times from sixty to seventy. When racial or other factors enter, isolation is possible without additional expense.

From the main hospital the various first-aid stations in the works are directed and the nurses at these stations are in constant communication with the hospital day and night.

Thirty student nurses are housed in this new residence.

Off the solarium on third floor is a gymnasium with reconstruction outfits, occupational therapy equipment and facilities for massage work.

Expense has not been spared in furnishing the nurses' home.

DIETING AT THE WALDORF

Enters now Oscar of the Waldorf-Astoria into the sacred province of the hospital dietitian. With his seven diets, Oscar has set out to prove that an individual can live on the viands of a great hotel and not only retain his digestion but even correct various disorders by means of the menu card.

The Waldorf-Astoria is perhaps the first hotel to inaugurate a scientific diet service for the patrons of its dining rooms. A medical consultant has aided Oscar in presenting to Waldorf patients the seven diets, any one of which may be obtained from headwaiters on request. Each patron is asked to follow his diet under the advice of a physician.

Oscar's Diet Menu No. 1 is a high cellulose diet for patrons with the atonic type of constipation and intestinal-toxemia. Diet Menu No. 2 is high cellulose, low calory, low in fat starch and sugar for obesity. "Food quantity, food quality and the Will to get thin are important factors in reducing," says the menu of this diet. "Obesity fads do tremendous harm. Weight reduction by following the straight and narrow paths of rational dieting and exercise rather than the devious paths of drugs and 'isms is the only safe course. A reducing cure should be supervised by your physician."

There are also a moderate fat diet, a low cellulose, low condiments diet, a low cellulose, a high calory and high fat diet for children and convalescents, a low purin diet for rheumatism and gout and a low salt and low purin diet.

In announcing the scientific diet service to its patrons, the hotel management warns against over-eating, imperfect mastication and mental perturbation at meals.

"It is to be understood," says the announcement, "that the Waldorf-Astoria is in no sense prescribing diets and has no food fads or fancies to foist upon its patrons. It is simply making special dietetic articles and properly cooked foods available. Persons making use of these diets should submit them to their medical advisor for individualization."

THE NURSES' RESIDENCE

By EDWARD F. STEVENS, Stevens & Lee, Architects, Boston and Toronto

THE nurses' residence is no longer a rooming house where persons go for purposes of sleeping only, but has become a technical school for the nursing profession. While there must be sleeping quarters, of course, there also must be accommodations for teaching and study, and provision for the social function and the tete-a-tete with sufficient reception and common rooms to allow nurses to receive their friends decently.

Certain standard principles should govern all nurses' homes as to size of rooms, proportion of toilets to rooms, light and air, and as to provision for the care of nurses when ill. Protection also should be afforded the night nurse who must sleep through the day.

It is the opinion of many who have charge of the training of nurses that no sleeping room, whatever the size, is large enough for two. There should be space for a bed or, as many prefer, a bed couch, a bureau, a small desk and bookcase (which can be combined in one piece of furniture), some comfortable study and relaxation chairs; a picture or two on the wall; and at least one rug on the floor should be provided.

Windows should be so arranged as to give the best light, and artificial light so placed for reading as to prevent eye strain. The room closet should be large, and if lighted by a small window, its usefulness will be increased. A set bowl in each room is appreciated by the nurse.

A room to meet the above requirements should be not less than eight by twelve feet.

There should be allowed in the nurses' residence one tub or shower to every six nurses and enough toilets to allow one closet to every six nurses. If the wash basins are in the toilet section, there should be one bowl to every three nurses; additional dental bowls facilitate the working of the home.

Teaching Facilities for the Nurses

If the nurse is to receive her preliminary training outside the hospital, provision should be made in the home for laboratory work and for the teaching of dietetics. There should be a complete utility room, fitted with the actual equipment that will be found in the hospital. Of course, rooms for lectures and demonstration, besides the larger social and reception rooms, should be provided.

Coming from the care of patients, the nurse upon entering the home should step into a different atmosphere. There should be nothing to remind her of sickness. The colors selected for

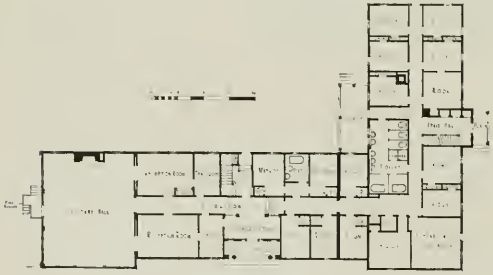


Fig. 1

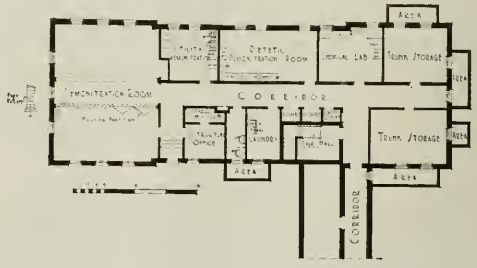


Fig. 3.

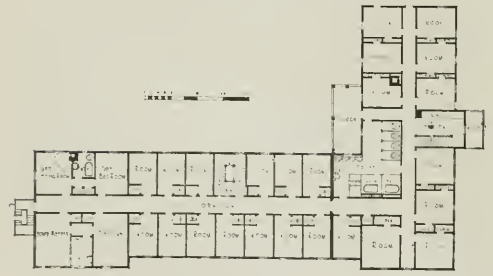


Fig. 2.

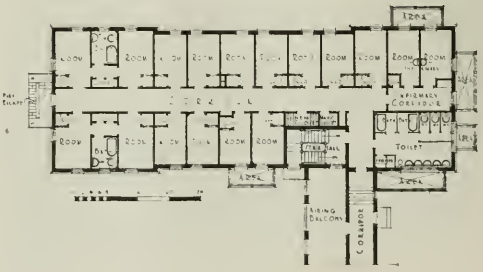


Fig. 4.

Fig. 5.

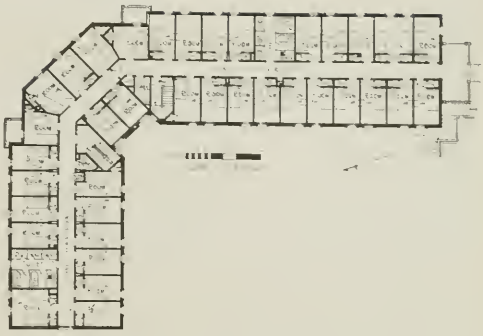


Fig. 6.

the walls and ceilings of the rooms should be different from those for the hospital. While plain details of finish make the care of the home less irksome, there should be enough detail to give interest; the entrance, at least should possess some architectural merit.

In most homes rooms are set apart for nurses on night duty, with the doors merely tagged "Night Nurse Sleeping." A device which the writer found in a hospital in Holland has been adopted for use in the States and is herewith shown. It is merely a permanent part of the number plate which every door should have, showing the name of the nurse. The "drop," when lowered, exposes in large letters the word, "ASLEEP." (See Fig. 9.)

New Addition to Heywood Home

Of the four nurses' residences here considered, conditions governing the planning were so varied that they bear little resemblance one to another except as to individual rooms for the nurses.

The Heywood Nurses' Home (Figs. 1 and 2) was an addition to an existing building, so that the functioning of the rooms is not as it might have been if planned originally.

In the new portion are the reception rooms and library, the small parlors, and the little pantry for the preparation of the midnight feast. The house matron's room is on the first floor, with an observation window near the entrance so that she may keep her motherly eye upon the "late leave." The superintendent and members of her staff have suites of rooms on the second floor. The diet kitchen and laboratory are in the basement.

This is a simple home of wood construction, housing sixty-nine nurses, and is located about 500 feet across the street from the hospital.

Annex Provides Sleeping Quarters

The New Britain Nurses' Residence (Figs. 3 and 4) is also an addition to the existing home. Built, as it is, in the rear, the social parlors and reception rooms are in the front building; the new residence functions for the housing of pupil nurses, with suites of rooms for the head nurses.

On the first floor, two rooms are set apart for an infirmary, fitted with a small utility cabinet containing a gas plate and emergency equipment.

On the ground floor are located the teaching sections, a large subdivided lecture hall, service room with working equipment, laboratory and dietitian's laboratory, trunk room, small private laundry, etc. The toilets are located near the entrance and are well lighted and subdivided into sections.

The connecting corridor to the front building is made wide enough for a sleeping porch. Heat is supplied from the hospital plant at the north.

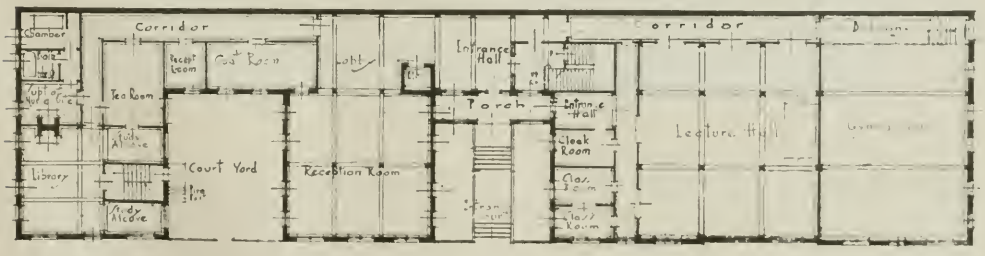


Fig. 7.

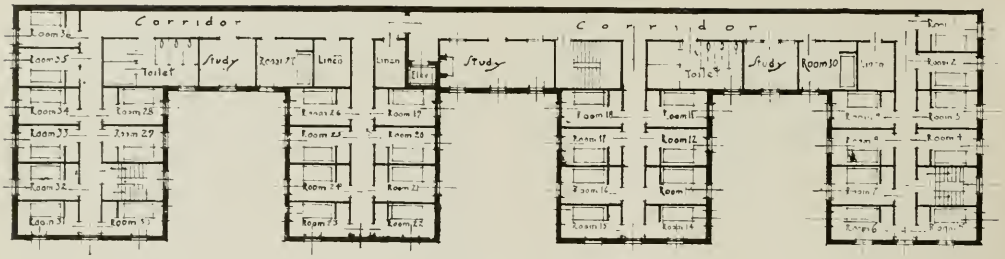


Fig. 8.

The residence is not connected with the hospital which is about two hundred feet distant. The building will have brick walls and will be of second class construction.

Sisters' and Nurses' Home Combined

The nurses' residence of St. Joseph's Hospital at Hamilton, Ont. (Figs. 5 and 6) functions in a two-fold manner, being a home for the Sisters of St. Joseph and a residence for the pupil nurses of the institution. There are separate entrances and separate staircases in each section.

The "L" shape, with the double approach on the angle, lends itself to the condition of facing on two streets, while the angle makes an excellent location for the main reception room and library, which are entered from both the Sisters' and the nurses' portion of the building.

While the three homes previously described are located on lots where there is plenty of light and air, the conditions governing the nurses' residence for the Harrisburg Hospital (Figs. 7 and 8) are entirely different. A rather narrow street and two narrow city lots necessitate building into the air to obtain room for the 200 or more nurses eventually needed. To utilize the land to the best advantage, the home is being built in a series of short pavilions facing the street and the hospital across the street.

On the first floor, approached from the center court, is the main entrance leading to the reception rooms and offices, and at a slightly lower level the assembly hall. On the front of the building is the suite of the superintendent of nurses. Elevator and staircases lead to the floors above which are to be occupied by the pupil nurses. When finished, the building will be seven stories in height, with single rooms and home accommodations for 216 nurses. Each nurse's room has a lavatory, a large clothes closet and ample room for comfortable living. At the center of each court, facing the south, will be a study room.

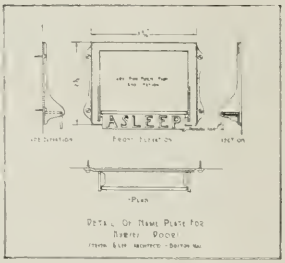


Fig. 9.

On the ground floor will be located the teaching rooms, the chemical and dietetic laboratory and the demonstration service room.

Every room will receive sunshine, as the building faces south.

VALUE OF CLINICAL HISTORY

The value of a proper clinical history has been obscured in the minds of many by the elaboration of the multitude of laboratory tests, it is feared by *The Bulletin of the Harbin Hospital* at Rome, Ga. The bulletin declares:

"Laboratory tests have become a fetish at whose shrine too many physicians are inclined to worship, overlooking the fundamental values which may be obtained by employment of reasonable intelligence and observation. A careful history going back to the earliest period of the patient's life, bringing out supposedly minor details which may be of a very definite significance, refreshing the patient's memory of all other events and building up a structure in detail will in a number of cases do more to establish a diagnosis than all of the laboratory tests put together.

"It is not meant by this to discredit the value of the laboratory, as it is today an absolutely essential adjunct. The clinical evidence must not be overweighed or distorted by laboratory findings, as they are often not compatable. The laboratory must be the servant of the physician and not his master. In the findings analogy, discretion, intelligence and experience which may be summed up in one expression, and may be termed 'clinical judgment' is our one unfailing asset.

"While upon this matter it may be remarked that as a general thing the family history is of little importance. The case of antecedent nervous systems, a general idea of the family physique and the presence of tuberculosis—not from the standpoint of family susceptibility, but rather to furnish knowledge of exposure—when we have covered this ground we have known almost all that is to be learned from a family history."

"Work is the law. Like iron that lying idle degenerates into a mass of useless rust, like water that in an unruffled pool sickens into a stagnant and corrupt state, so without action the spirit of men turns to a dead thing, loses its force, ceases prompting us to leave some trace of ourselves on this earth."—Leonardo da Vinci.

THE DEVELOPMENT OF A RADIUM AND ONCOLOGIC INSTITUTION IN CALIFORNIA

By REX DUNCAN, M.D., Medical Director, Radium and Oncologic Institution, Los Angeles, Cal.

THE organization and development of The Radium and Oncologic Institute were made possible through the interest of King C. Gillette and others, who because of certain personal benefits received, desired to make available to the public adequate quantities of radium and the necessary apparatus and facilities for the study and treatment of neoplastic diseases and other appropriate conditions.

Organized in 1918

The incorporation was completed in December, 1918, and the medical director instructed to make a survey of certain hospitals and institutions in this country. Based upon these observations and several years of personal experience, plans were drawn for a building for the Institute which was completed and occupied in August, 1919. On account of the large number of ambulatory cases treated at such an institution a site was chosen on Sixth Street at Lucas Avenue, which is about a five-minute ride on the street car from the center of the business district. This street is one of the principal cross town thoroughfares, sufficiently far from the business section to avoid, to some extent, noise and traffic congestion.

The building with a southwest exposure is located on a corner lot 70x145 feet. The "L" shape of the present building leaves room for an additional wing 45x70 feet retaining a small garden and lily pond. The building is of Class A construction. The exterior is of a classical Spanish type of architecture, which is consistently carried to the interior and combines simplicity of design with pleasing artistic effect. (See illustrations).

General Plan of Hospital

The basement has a furnace room, workshop, several storage rooms and two bedrooms with bath for employes. On the first floor are the business office, reception rooms, physician's offices, examining rooms, treatment rooms, radium laboratory, clinical and pathological laboratories and x-ray department.

The second floor is devoted to the hospital department providing ten large private rooms, two two-bed wards, eight baths, utensil, sterilizing and supply rooms, operating room, kitchen and dining room for the employes.

In the hospital department, as elsewhere, an effort has been made to make the rooms attractive without sacrificing the advantages of sanitation. The hospital is under the supervision of a graduate nurse who has full charge of diets and kitchen, general supervision of nurses, and care of patients. Although no training school is main-

The Radium and Oncologic Institution of Los Angeles.

Main reception hall and information desk.

tained, undergraduate nurses are employed for seven-hour duty and have been found most dependable for this work.

Only such patients are admitted in the hospital department as require the special facilities offered; they are retained in the hospital during the period of active treatment. The few requiring prolonged institutional care are referred to a sanitarium cooperating. The number of hospital days per patient varies from one to fourteen. The average number of days for a hospital case is approximately four, enabling the institution with a limited number of rooms to handle a rather large volume of work. Ambulatory cases requiring only a few hours in bed are not admitted as hospital cases but cared for in properly equipped treatment rooms on the first floor.

The corner of a reception room.

Although the hospital is thoroughly equipped for general surgery it is not practiced in the institution; the operative work is limited to a certain class of cases for which the institution is conducted.

Medical Director Supervises Institute

The work of the Institute is divided into several departments, each with a capable head who cooperates and works under the general supervision of the medical director.

The business management of the institution is handled by the business manager, who has charge of the general business conduct of the institution, including maintenance, purchasing of supplies, collection of accounts, etc. He also interviews each patient who seeks, or is apparently deserving of, special financial consideration to determine his financial status. On these findings are based charges for professional services. This service greatly assists patients in keeping hospital and other expenses at a minimum and prevents dissatisfaction by a definite preliminary understanding regarding the payment of accounts.

X-Ray Department is Well Equipped

The x-ray department is in charge of a competent roentgenologist who with the necessary technicians supervises the diagnostic and therapeutic work. This department is equipped with the most modern and complete diagnostic and therapeutic appliances including a new 280,000-volt Victor machine and other necessary apparatus affording the most modern facilities for deep x-ray therapy. Careful records are kept and close cooperation with the clinical laboratory makes possible certain studies which are of considerable interest and may prove of great value in this newer field of work.

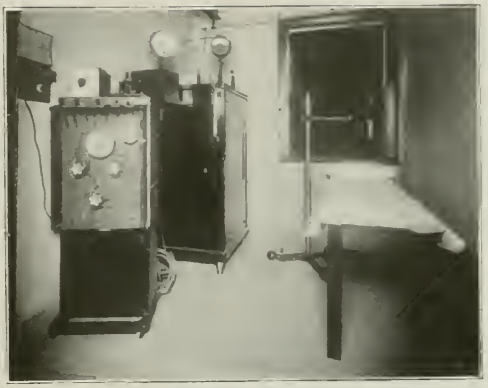
The clinical laboratories, in charge of a competent pathologist, are fully equipped for clinical, general pathological and certain research work. On each patient are done the basal metabolism determination, blood Wassermann, complete blood count,

An inviting corner of the library.

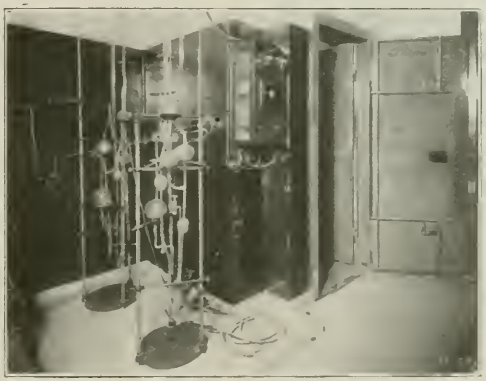
CO_2 blood retention, blood cholesterol and such additional blood chemistry as has been indicated. Tissue work is also done wherever practical.

One Gram of Radium on Hand

The radium department includes the radium laboratory and clinical branch. The radium laboratory is in charge of a physicist responsible for the collection and measurement of the radium emanation, which is obtained daily in such forms and quantities as the clinical department directs. In the laboratory there is approximately one gram of radium element in the form of bromide in solution. This solution is contained in a small safe which is permanently placed in a reinforced concrete vault in which there is also located the first set of vacuum pumps connected with the radium in solution. (See illustration.) These pumps are connected by glass tubes through the wall with another set of mercury pumps outside of the vault, the whole comprising what is known as a radium emanation apparatus. This apparatus contains the radium emanation given off by the radium in solution. The emanation is collected in small glass capillary tubes measured and turned over to the clinical department for use.



A small x-ray treatment room.



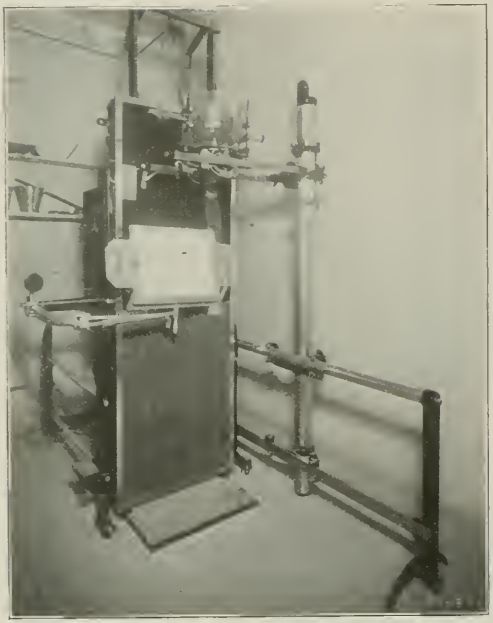
Radium emanation apparatus and vault.

The clinical branch of the radium department is directly under the supervision of the medical director, who, after proper examination and diagnosis have been made, prescribes and outlines the technique of treatment to be given each individual case. The assistant medical director personally supervises all radium therapy. The radium applicators are prepared and applied insofar as is possible by nurses who have been trained for this work. Nurses are assigned to this service for attending periods of two months, the other portion of their time being devoted to work in the examining rooms and the care and treatment of ambulatory cases.

General examination room.

All patients entering the hospital, if deemed appropriate for treatment in this institution, are, after a preliminary consultation with the medical director, referred to the internist who takes a complete history and makes a thorough physical examination. The routine laboratory work is done and such x-ray work as is necessary for diagnostic purposes. When the case has been thoroughly worked up it is discussed between the medical director and the various department heads and the treatment decided upon. The case is then referred to the proper department for treatment and is brought up from time to time for observation and discussion before the entire personnel. An effort is made to keep patients under observation and to maintain a complete and comprehensive follow-up record of all cases.

During the first three years of the existence of the institute, more than 1,500 new cases were treated. There were many subsequent visits, and



A corner of the x-ray fluoroscope room.

a large number of cases were examined that were not treated. Practically one-third of this work was of a charitable or semi-charitable character. All cases were handled in the usual routine without distinction.

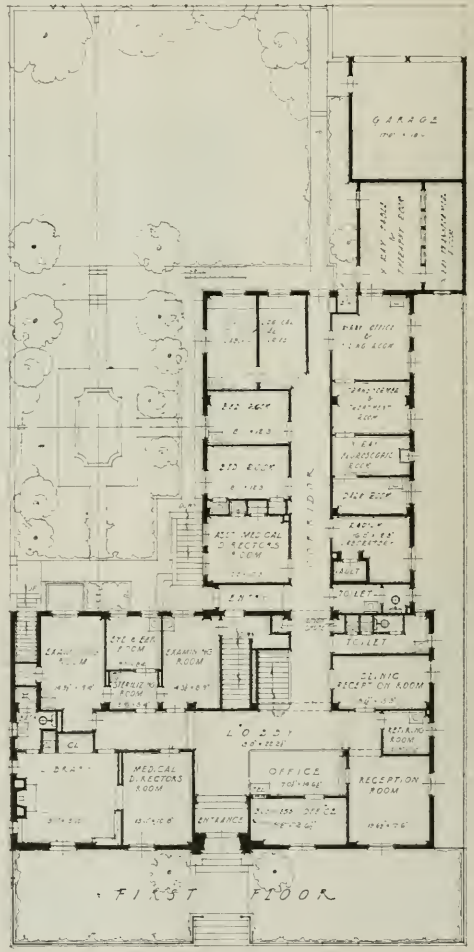
At the beginning of the fourth year new deep x-ray therapy equipment was installed, and the personnel and facilities of the institute were increased. The directors then decided to establish a definite clinic for the study and treatment of appropriate indigent cases. The medical profession is cordially invited to attend this clinic, the hours being from 9 to 10 on Wednesday and Saturday morning.

Scope of Institute Grows

With the establishment of this clinic, approximately one-fourth of the facilities of the institution have been set aside for the treatment of ambulatory indigent cases. There has been as yet no arrangement for free beds; however, certain patients pay only their hospital bills and many cases are treated at the County Hospital and other charitable or semi-charitable institutions.

The present assets of the institution amount to approximately $200,000. No interest or dividends have ever been paid on the original investment which was made purely from philanthropic and scientific motives. There is no endowment for maintenance, and overhead expenses incident to the conduct of the institution must be paid from the income derived from patients who are able to pay all or part of the usual fees. By careful supervision the institution has been able to maintain this overhead and accumulate a small surplus which has been used for the purchase of additional equipment.

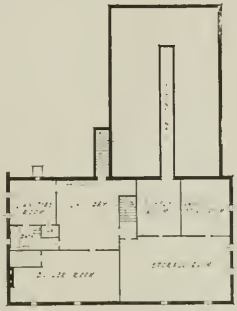
It is not within the province of this paper to enter into a scientific discussion of our work. A large majority of the cases treated by the institution are referred there by the medical profession, with whom the Institute cooperates to the fullest of its abilities. Practically all these cases are for diagnosis and for radium or x-ray therapy. Of this group about 75 per cent are malignant; the remainder includes a large variety of benign tumors, various skin diseases, goiters, etc.



Plan of first floor.

The results obtained have been very encouraging and justify continued scientific study which is possible only in a highly specialized institution possessing all facilities necessary for diagnosis and treatment. More recently there has been treated, by the internal administration of radium, a carefully selected group of cases of chronic arthritis, high blood pressure and certain other constitutional diseases. Results thus far have been encouraging.

The scientific work of the institution and the results and observations of treatment furnish the basis of scientific papers prepared by the medical director and others of the personnel for presentation before various medical societies, and publication in various medical journals.



Second floor plan and basement plan above.

Safe and radium apparatus within the vault.

FIND "REST PAUSES" ECONOMICALLY AND PHYSICALLY BENEFICIAL

The Industrial Fatigue Research Board has issued a report on the boot and shoe industry, showing how in 1912, methods of giving rest to girl machinists, especially, were advocated on the basis of economic efficiency and physical welfare. But the coming of the war caused these measures to be given up, until in 1918 a shoe manufacturer found it necessary to increase his output without increasing his equipment, because of the difficulty in procuring machinery. It was decided to give the system of rest pauses a trial. The experiment was tried in a "press room" where the leather is cut into pieces by a machine, the handling of which requires a good deal of skill. Instead of having two girls working all day, three girls were employed each one working forty minutes and resting twenty minutes out of each hour. The results were so favorable that the system was adopted. The increased output on different machines varied from 34 to 75 per cent, and averaged 44 per cent. The effect on the workers was very beneficial, their health improved and they said that they no longer felt tired after the day's work.

WORKING OUT THEIR HOSPITAL BILLS

On private patients at Old Philadelphia Hospital did not fall the burden of helping maintain charity and part-pay wards. Clerk Benjamin Franklin of the hospital board of managers has in his minutes the following regulation:

"That such patients as are liable shall assist in nursing others; washing and ironing the linen, washing and cleaning the rooms, and such other services as the matron shall require."

STAINS ENCOUNTERED IN THE HOSPITAL LAUNDRY*

By WALTER TRIMBLE, Chicago

IT IS not possible to give in a limited space a full list of the stains found on the goods that come to the hospital laundry with directions for their removal, but a few general remarks on this important subject, with an outline of general principles, may be of assistance to the laundry manager.

Stains, like dyestuffs, may be divided with respect to their removal through reduction, or chemical action, into two general classes: (1) those which disappear through the application of a bleaching agent or oxidation; and (2) those which are removed by the opposite process of taking the oxygen away from them. Fortunately, the latter type is not encountered as frequently as those stains which come out through the actual removal of the atoms that make the stain, by the use of soap, alcohol, naphtha or other solvents. In other words, some stains are destroyed, and others are removed from the goods through detergent action with no actual change in the stain material.

First of all, I will caution the manager of the laundry department either to attend to the removal of all stains himself or to place the matter in the hands of a capable employe; it is a mistake to let several persons dabble with the necessary chemicals. Any stain that will be found on white cotton or linen goods may be removed, provided the discoloration has not been caused by some substance which has damaged the fiber; but it should be remembered that while some of the materials used in removing stains are harmless, others, if used improperly, will weaken or even destroy the fibers. As a general thing if a solvent will not mechanically remove a stain from colored goods, the stain had best be left alone since the material used in reducing the stain may also remove the dye. This is not always the case, however, but it is a matter upon which only an expert should attempt to pass judgment.

Advance Information a Help

If one can know in advance the nature of the stain that is to be removed, the procedure of removing it in nearly every case becomes comparatively simple. Most of the difficulty encountered comes from a guess at the nature of the stain and the consequent use of the wrong material. Hence, if the person who stains an article will send it to the laundry department at once with a correct statement as to the nature of the substance which caused the stain, the discoloration may be removed without difficulty. It is much better to remove some stains before the goods goes to the washing machine, for the washing process may "set" the stain and make it all the harder to remove.

Many stains are removed in the washing process through detergent action, and where bleach is used other stains are removed through oxidation, or "adding oxygen," as one might say. But the laundry manager should not make the common mistake, especially in the case of flat work, of using a bleach bath with the sole object of removing the few stains that may be in the goods. As I have stated, it is much better to ascertain the nature of the stains in advance and give special treatment to those that will not come out in the ordinary washing process.

When I speak of bleach I refer to what is now commonly known to the laundry trade as javelle water,—either a solution made from chloride of lime and soda or an electrolytic chlorine bleach. As javelle water is used daily in every hospital laundry, it is not necessary to give directions for its preparation. It is advised that the L. N. A. standard solution be used, diluted fifty times.

Stains Most Frequently Found

Blood stains, of course, are the ones most frequently found in the hospital. Fresh blood stains are removed in what is known as the "breakdown" bath of the washing process, this being a solution of tepid water and washing soda. Old blood stains require a treatment with javelle

This pressing machine unit is located in the finished-work department of the laundry of the Misericordia Hospital, New York City. One person operates both machines. Hand-ironing boards, with electric irons, are shown in the foreground.

*This is the fifteenth of a series of articles on the hospital laundry written especially for THE MODERN HOSPITAL by Mr. Trimble.

water, to which they readily respond, but there is no reason for these being encountered in a hospital laundry.

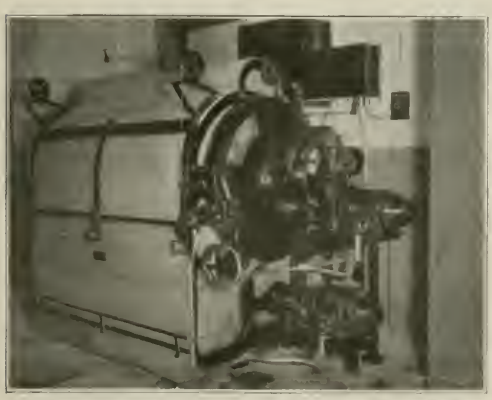
Various other stains of similar appearance are at times thought to be "old blood stains" and unsuccessfully treated as such, among these being iron rust and spots made by argyrol. Any stain that does not come out in the regular washing process, especially where there has been a bleach bath, is apt to be something other than a blood stain.

Next in frequency on certain classes of goods are medicine stains. If a stain has been made by a corrosive compound, such as carbolic acid, the fabric may be so much weakened that any attempt to remove the discoloration will merely result in a hole; hence, there is no wisdom in wasting time on it. Bad scorch stains and old mildew stains belong in this category.

Removal of Medicine Stains

Stains made by organic medicines, if not too old, usually come out in the ordinary washing process, especially if there is a bleach bath. This includes iodine stains, but here I would caution the reader against making the error of mistaking argyrol stains for iodine. Organic medicine stains that do not come out in the wash may be removed by a local treatment with a weak solution of javelle water. The stock solution should be diluted fifty parts and either neutralized with an acetic acid solution or rinsed out thoroughly; otherwise a tendering of the fiber will be the result.

Stains made by inorganic medicines which contain the salts of iron, silver, etc., should be treated locally with a weak solution of potassium cyanide. One-fourth ounce of crystals to a quart of water should be used, and it should be labeled poison.



The small drying tumbler is a most efficient piece of apparatus for drying bath towels, underwear, hosiery and various other articles. This one is located in the Misericordia Hospital, New York City.

The medium size flat work ironer is an excellent machine to install where there is not enough volume to keep a larger one busy or to help out a larger machine where the volume slightly exceeds its capacity. This machine is a part of the equipment of the laundry of the Misericordia Hospital, New York City.

This treatment converts the metals to cyanides which are soluble in water and therefore will wash out.

Nitrate of silver stains and those made by argyrol and other nitrate of silver compounds usually may be removed by use of javelle water. Any that do not respond to this treatment should be treated locally with the solution of potassium cyanide and then with a mild solution of ammonia, the latter to prevent the stain from reappearing.

There are very few food stains and table beverage stains that do not yield to the ordinary washing process; hence, it is hardly necessary to discuss these. Any that may not come out in the wash will respond to a local treatment with a weak solution of javelle water. Heavy greases that do not wash out may be removed by use of gasoline, naphtha, carbon tetrachloride, chloroform and various other solvents.

Stain Removal an Interesting Study

The removal of stains is an interesting study, and the laundry manager who devotes a little time to it will be well repaid. There are several good textbooks on this subject, and one may establish a small laboratory at a very small cost. In fact, practically everything that one will need may be obtained from the hospital pharmacy.

Paradoxically, the removal of stains is called "spotting"; that is, while the careless person who makes the spot is really the spotter of the defaced article, nevertheless the person who removes the spot is called the spotter.

The reader will do well to remember that what I have said applies only to white cotton and linen fabrics, not to colored ones, and not to woolens and silks. The principles are the same in case

All-metal washing machines, with direct-connected electric drive on each, are in use in the laundry of the Misericordia Hospital, New York City. The clock-like dials on top of the machines are instruments that automatically indicate the amount of water that has been admitted to the machine.

of all kinds of goods, but a chemical that may be safely used on one kind of fiber may ruin another.

The handling of spots is largely a matter of ingenuity. For instance, not long ago I visited a hospital where the nurses wore plain blue uniforms. There was considerable complaint because the laundry was washing the color out of the uniforms, and the nurses were much displeased because white spots were frequently made in garments that had not lost their color at all.

I diplomatically approached the manager of the hospital laundry on the subject and he complacently informed me that the grade of blue goods used was bound to fade after repeated washings, which was quite true. He then explained that the white spots were of necessity caused in the removal of various stains; this also was true.

"But," I asked him, "why not restore the blue color by the very simple expedient of giving the uniforms a heavy bluing bath?"

"I never thought of that!" was the reply.

ROCHESTER AS A HEALTH CENTER

Rochester, N. Y., will erect a municipal hospital to adjoin the new medical school of the University of Rochester which was made possible eighteen months ago by the combined gifts of John D. Rockefeller and George Eastman of the Eastman Kodak Company.

The board of trustees of the University of Rochester, after eight months' consideration, recently selected a new site for the medical school, and the new city hospital will be erected on grounds adjoining it. The project has the unanimous endorsement of university authorities.

In June, 1920, John D. Rockefeller and Mr. Eastman gave the University of Rochester for its school of medicine gifts aggregating $9,000,000. Last spring Mrs. Gertrude Strong Achilles and Mrs. Helen Strong Carter of Rochester gave another million for the hospital of the medical school as a memorial to their parents.

With the two hospitals in such close proximity, it is believed that Rochester will become a health center of importance. The university medical faculty will be able to utilize the interesting cases in the municipal hospital, it is declared, and the city hospital and the university medical school will be of mutual benefit.

DEMANDS ON HOSPITAL SOCIAL WORKERS

As the member of an athletic team knows the give and take of team play, so must the medical social worker be able to play the game with hospital, medical staff, patient and outside agencies in driving toward their common goal, the better health of the community. So writes Miss Marguerite Wales, R. N., director of social service, Stanford University Clinics, in an article in a recent issue of *The Pacific Coast Journal of Nursing.*

Although the hospital is primarily a place to heal the sick, it must also be remembered, Miss Wales writes, that it is a great teaching center. With this idea in mind the hospital social worker should appreciate the responsibility that falls upon her. In her department the student nurse gets her only idea of social work and she should receive there as thorough and conscientious training as she does on duty in a ward, in the diet kitchen or the operating room. She should learn something of the technique of social service, how best to approach the patient's home difficulties and how to consider the patient in relation to his family and community. Most important of all she should receive some inspiration for further study in social and public health work after her hospital training is completed.

To make the doctor's service more effective the social worker should supplement his work, seeking data in the patient's surroundings which may be of value to the doctor in diagnosis, and aiding him in carrying out his plans for treatment and education in hygiene.

In the private family there is always some individual who is capable of working out plans with the doctor. Though harrassed with worry still this intelligent person discusses plans with the doctor with an appreciation of the need of foresight and with mutual understanding. The social worker must be the intelligent member of the clinic patient's family. Often the family is foreign born and highly emotional and so completely upset that its members can think only of their immediate distress. The doctor is unable to get any reasonable consideration of what he proposes to do. The social worker must fully understand the doctor's plan for the patient and help the family understand it; but first she must have the complete confidence of the family.

Realizing that the patient's bodily illness has made demands upon him beyond his powers of adjustment, it is the task of the social worker to use her training and experience to work out a plan either to improve the condition of the patient himself or to adjust his environment to his needs. How best to get at the secret of his failure depends upon the amount of confidence the social worker is able to inspire in him. If she comes as a nurse or the doctor's representative there are no artificial barriers and the patient is instantly ready to discuss with her his every difficulty.

Every medical social worker should have some actual experience in public health work—in the visiting nursing side of it. Dr. Cabot says the frontier separating the visiting nurse and the medical social worker should be rubbed out and the two groups become fused. The hospital social worker must know and sympathize with the limitations of a home and have a fine conception of what the patient's obstacles really are.

CONFINING NOISE IN THE HOSPITAL TO ITS SOURCE

By RICHARD RESLER, Resler & Hesselbach, Architects and Consulting Engineers, New York

ARCHITECTS and engineers are usually restricted in designing and planning new hospitals on account of limited building funds. Therefore, it is precluded that the utilization of recognized double wall soundproof construction and soundproof floors, to meet the common request for quiet, must be abandoned as too costly. Consequently to arrest the transmission of noise in a hospital is a well nigh impossible accomplishment for an architect or an engineer to achieve in connection with hospital planning.

In a modern fireproof hospital of steel construction, with its masonry walls and concrete floors, hard plaster, tiled partition walls enclosing a maze of plumbing and heating pipes, and with its absence of carpets, upholstered furniture and hangings, the natural tendency is for the walls and frame of the building to become veritable sounding boards which readily transmit and magnify noises throughout the hospital.

Noisy Departments in Separate Units

This difficulty, however, can be overcome to a great extent by assembling the various disturbing departments into separate units which will confine the noise as far as possible to the locality in which it originates. This result can be accomplished without great expense and without utilizing much more floor space than would be normally required.

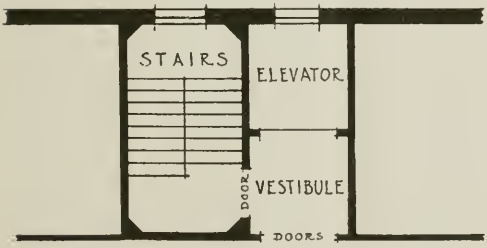


Diagram A.

Obviously, this treatment of the problem would be of no avail should the institution be located on a noisy thoroughfare with heavy traffic constantly passing, but fortunately very few of our hospitals are so situated. Therefore, in this article reference will only be made to noise developed within the building proper.

The most pronounced disturbance in a hospital is primarily the noises which emanate from the patients themselves and from the hospital personnel in the service departments.

Noise caused by the patients can be somewhat alleviated in a practical manner by a careful selection and utilization for partition construction of standard materials embodying soundproofing qualities. The relative soundproofing qualities of various types of terra cotta, gypsum and other partition materials have been covered in comprehensive reports of tests conducted by well known acoustical authorities and reference thereon can be readily made.

Vestibules Will Diminish Sound

The noise, however, originating in the service departments, the stairs and elevator, such as the clattering of cutlery, pans and dishes in the diet kitchens, the handling of utensils and the flushing of plumbing fixtures in the porter's room, the handling of bedpans and utensils in the utility room and the elevator and stair traffic, is of an entirely different character and cannot be so easily overcome owing to the usual location of these rooms directly on the corridor. During certain periods of the day when the traffic is greatest, the doors are open for long intervals. By the construction of a vestibule between room and corridor, thus requiring passage through two doors, the noise can be sufficiently confined to its source so as not to be a disturbing factor to the patients within the building.

It is now common practice in our new hospitals to place stairs and elevator adjacent and enclose them both in one shaft with a common vestibule, as shown in Diagram A. This vestibule should be planned of sufficient length to contain the stretcher and allow the corridor doors to close while the stretcher is stationed in the vestibule awaiting the elevator. The results attained in this manner have been most satisfactory.

To prevent the transmission of noise from the service departments to the rest of the building, the writer has recommended for a long time the further carrying out of this principle wherever possible by grouping the allied service depart-

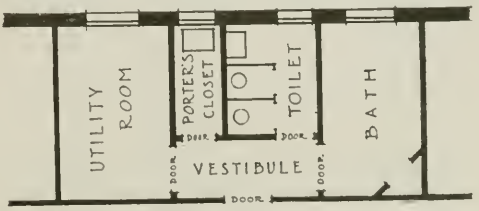


Diagram B.

Diagram C.

ments into various suites, each suite to be entered through a common vestibule. This arrangement has the further advantage of preventing the permeation of the building with kitchen and toilet odors.

For instance, the utility room, toilet, bath and porter's closet could be combined into a separate unit with a common vestibule. The diet kitchen and storage room could be similarly treated. This classifies the different functions of these units and still maintains them separate and distinct from each other. Reference is made to Diagrams B and C, respectively.

It is the usual practice, in order to provide an economical plumbing and heating arrangement, to place the service departments over one another on the various floors so that dumbwaiters and pipe stacks are vertical and continuous. Consequently, noise emanating in one service department, provided it is confined, will travel up or down to the other without transmitting disturbance to the rest of the institution.

Delivery Suite Should Have Double Walls

However, the conditions encountered in planning a nursery and delivery suite are totally different. These are at times the noisiest of all departments and are usually located on one floor only, being surrounded by patient's rooms. As the ordinary partition construction is not satisfactory in a situation of this kind, the writer suggests the use of double wall soundproof partition construction augmented further by a common vestibule. Reference is made to Diagrams D and E, respectively.

In view of the common request and appeal for quiet which greets one in all hospitals, either by

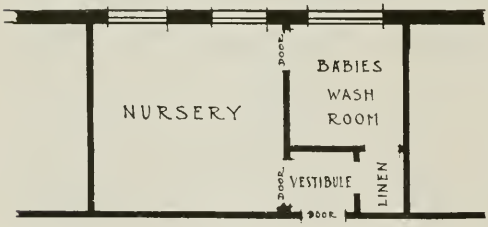


Diagram D.

Diagram E.

legends on the walls or otherwise, it seems that by an economical and practical arrangement of the various units in a hospital much of the existing criticism can be overcome.

NURSING SCHOOLS FOR DAUGHTERS NOT FOR MAIDS

Boards of managers should make their schools of nursing places where they will be eager to send their daughters instead of their maids, says Miss Amy M. Hilliard, R.N., of Troy, N. Y., in an article on "Responsibilities of Boards of Trustees and the Community to Schools of Nursing" in a recent issue of *The American Journal of Nursing*.

"Trustees should acquaint themselves in detail with the essential factors for the development and maintenance of a school of nursing; they should see that it is comfortably housed, and in connection with a hospital that has not only gained the confidence of the public, but is ranked in Class A by the American College of Surgeons and the state boards of charities. They should see that the finances of the school will make possible the appointment of a strong teaching staff and the development of reasonable social, educational and recreational activities outside the hospital,—in other words, they should make the school a place where they will be eager to send their daughters instead of their maids."

Miss Hilliard declares that lack of money has been the chief obstacle in the path of developing schools of nursing and has been the cause of much unnecessary sacrifice of student nurses. In reality, she says, the hospital is a hotel for the sick. It has all the expense of maintenance of other hotels plus that of medical attendance, nursing attendance, special departments, etc. But what proportion of patients, she asks, expect to pay even the same amount for hospital accommodations as they would be obliged to pay for hotel accommodations in the same city?

The first consideration for a successful school of nursing is that it rest upon a firm financial foundation, Miss Hilliard says; the next is its faculty. No school can ever be better than the leadership given it. The principal must be selected with as much care as the principal of any other professional school. It is the solemn duty of board members to find a woman of good professional education and executive ability and not to appoint someone because she has acceptably taken care of their children, because she gets on well with the doctors, or is a good surgical nurse. The accepted standard curriculum prepared by a large group of nurse educators can only be adopted if the school has an adequate and well trained staff of instructors.

It is the responsibility of the community, Miss Hilliard writes, to see that schools of nursing have the necessary status educationally and legally to place them on a firm foundation so that their product, the graduate nurse, will not be forced to meet on an almost equal footing the graduates of short course schools.

WHEN TERMINAL DISINFECTION AFTER INFECTIOUS DISEASES SHOULD BE EMPLOYED

By D. L. RICHARDSON, M.D., Superintendent, Providence City Hospital, Providence, R. I.

THE subject of terminal disinfection after infectious diseases is of widespread interest to hospitals and the public. No more frequent question is asked concerning isolation of contagious patients than what to do to the patient and room at the termination of the disease.

This paper will be confined to disinfection after scarlet fever, diphtheria, measles and diseases which we know postively are transmitted by contact.

"Fumigation, as ordinarily applied in terminal disinfection, accomplishes very little and is unnecessary. Too much stress has been placed upon contaminated surroundings and too little upon the patient himself or upon those persons whom he has exposed. In contact diseases the whole room occupied by the patient is not contaminated and fumigation serves no other purpose than to appease the conscience of hospital authorities, health officers and the public. The chief source of infection in contact diseases is not environment but direct and intimate contact with the fresh secretions or excretions of persons who are suffering from disease in a frank or unrecognizable form and with carriers."

Terminal disinfection after insect-borne diseases, such as typhus fever, yellow fever and malaria, is quite unnecessary except to destroy infected insects. Isolation in such diseases should aim to prevent insects from becoming infected by the patient, and infected insects from biting well persons. Germs of such diseases are carried in the bodies of infected insects and contact with the patient offers no danger unless infected insects are about. Terminal disinfection after these diseases should be confined to measures to kill all insects in the quarters occupied by the patient.

The contact diseases constitute quite another problem. During the course of the illness the virus escapes from the body either in secretions or excretions of the body or in wound discharges. These are likely to be spread about more or less generally unless great care is taken to prevent that practice, so that theoretically any small or considerable portion of the room occupied by a patient or its contents may be contaminated.

Whole Room is not Contaminated

From a practical point of view, however, it has been found by experience that the whole room and its contents are not contaminated. The things which are most likely to be a source of danger are those which most probably have been soiled by the secretions or excretions and discharges, such as the pillow, the bed clothing, the nursing utensils, bedside table, the chair or chairs occupied by the patient or nurse, the wash bowl and toilet, toilet articles, door knobs, etc. It also must be realized that different objects are contaminated to varying degrees. Germs die rather promptly after leaving the body, and while the process of contamination goes on during the illness the virus is also being constantly killed by drying and by sunlight. As convalescence is established, the number of germs discharged from the body constantly decreases so that at the end of the established period of isolation the patient is quite harmless, except in the case of a small percentage of persons who become temporary or permanent carriers. It usually follows, then, that the infection which reaches various parts of a room early in the disease is quite dead, and that a room occupied throughout the entire course of the disease in most instances is harmless at its termination. On the other hand if the patient dies or is transferred to another room during the acute process of the disease, the vacated room is a much greater source of danger.

This more rational view of room contamination is gaining rapid headway. In the minds of those who still cling to the idea of aerial transmission of disease, the whole room occupied by a patient is a hot bed of infection. Careful observation in the hospital and home prove this view is not tenable.

Fumigation Only Appeases Conscience

Fumigation is no longer thought to be necessary and serves no other purpose than to appease the conscience of hospital authorities, health officers and the public. In March, 1905 Chapin in Providence ceased fumigation after diphtheria unless it was requested by the family. In his annual report for 1908 he statistically shows that there had been no greater recurrence of the disease in homes after discontinuing disinfection than before. In November, 1908 he ceased fumigation after scarlet fever and subsequent experience confirmed the fact that it was not necessary

after this disease. Since that time gaseous disinfection after contact disease has been quite generally abandoned in the United States although it is still practiced in many communities and hospitals.

That gaseous disinfection is at least unnecessary, hospital experience has conclusively shown. Since the opening of the Providence City Hospital in 1910 no fumigation has ever been done. There has been no evidence in a single instance that thorough cleanliness of the room and contents was not entirely sufficient. A detailed study of this may be found in an article published by the writer in 1913-1914 Vol. I, pp. 70-80 of THE MODERN HOSPITAL. It is obvious from this study that no child who contracted an infectious disease in the hospital did by any stretch of imagination pick up the infection from the room which had been previously occupied by the patient suffering from the same disease. The same procedure has been carried out for the prevention of ambulance infection and there is no evidence that any ambulance has ever been a source of disease.

In terminating isolation it should be emphasized that the patient is a far greater potential danger to others than the room he occupied during his illness. He may be a carrier, diphtheria, typhoid or scarlet fever, as the case may be. It is a very difficult problem to free him from such infection; certainly it cannot be done by any kind of a bath. The room and its contents however are quite free from infection by the time the patient convalesces in it. If, as has been stated, the patient is sent to the hospital or dies in the acute process of a disease, then the possibility of room infection is of some importance. It is not contended that room infection might not be possible, particularly if contents may be smeared with secretions or excretions, but it is strongly maintained that such a source of infection is very slight and that the importance of terminal disinfection has been much exaggerated. If the excretions and secretions of the patient have been promptly disposed of and strict cleanliness observed during the nursing of the patient, room infection is trifling.

Terminal disinfection applies first to the patient, secondly to the room and its contents.

It is very proper for the patient to have a bath on discharge; but any infection carried on the surface of the body is not to be compared to the possibility of germs being carried in the nose and throat or intestinal tract. A bath of soap and water, including a shampoo, is quite sufficient. It is not of sufficient importance to require the use of chemical solutions. In the hospital a patient should receive the terminal bath a day before discharge and be placed in a "clean room" so that he will not be sent out of doors before he has had time to dry satisfactorily. This is particularly important after scarlet fever, for exposure may set up rhinitis and if the patient is still a carrier a discharging nose renders him much more infectious. After the cleansing bath the patient should put on clean clothing and the infected clothing be left in the room.

The treatment of the room after discharge of a patient differs in the home and in the hospital. Terminal disinfection of a room in the hospital will first be described. It is assumed that the room has been occupied by the patient alone. The patient's washable clothing, the bed linen, towels, etc., should be collected into a bundle and sent to the laundry to be washed. Mattresses and pillows should be put out in the sun for at least six hours. If the patient dies in the acute stage of the disease or is transferred from the room while acutely ill, or if the clothing is obviously soiled, it should be sterilized by steam under fifteen pound pressure for thirty minutes. Continued sterilization by steam injures the fabric so that mattresses and pillows soon become very much damaged. It is found that sunning in the open air is under ordinary circumstances quite sufficient. Such textile clothing of the patient as is not washable should be hung out in the sun for at least six hours. Shoes, belts, gloves, rubber goods, money and other valuables may be washed with soap and water and air dried, preferably in the sunlight. Magazines, papers and books, should be destroyed or pinned up in a towel and sterilized by steam. All nursing utensils not damaged by heat should be boiled for at least ten minutes. Thermometers and other small articles can be submerged in 70 per cent alcohol solution or of phenol 1-60 for half an hour. Toilet articles should be washed with soap and water and air dried. The bed, bedside table, chair, bell cord, lavatory, door knobs, curtain cords and the wall about the lavatory and window should be washed with soap and water.

If the patient sick with an infectious disease is in the same room with other patients, it is very important to ascertain whether the other patients are immune to this disease. All those who are susceptible should be isolated separately during a period equal to the incubation period of that disease. The first patient should be isolated as soon as discovered, preferably in a separate room. After his removal disinfection should be carried out just as described above except washing of the walls. The mattress, pillow, bed linen, nursing utensils may be moved with him to the room where he is isolated if it is in the same ward. It is not necessary to clean the whole room or to subject other patients in the room to the

same procedure, but the latter should be watched carefully so that symptoms may be detected at the earliest possible moment.

Disinfection in Home More Complicated

Terminal disinfection in the home is more perplexing because of the presence of many articles of furniture, draperies, shades, carpets, rugs and the like. Again it should be emphasized that the room as a whole is very slightly infected. It is not necessary to destroy these things nor subject them to a damaging process of sterilization. Neither is it necessary to repaint and paper the room.

Methods of disinfection as described for a room in an institution are applicable in a home, including of course the cleansing bath of the patient. The mattress and pillow, blankets, draperies, rugs, etc., should be put out in the sun for at least six hours. Furniture and woodwork can be washed with soap and water, employing a neutral soap so that the finish will not be damaged. Attention should be paid also to the bathroom and fixtures and especially to utensils used by the patient or his nurse, as already described. Utensils which are boilable should be boiled in a pan before being washed. All the linen in the room should likewise be boiled before washing. After airing for twenty-four to forty-eight hours the room is quite safe for any one to occupy.

It is quite right that terminal disinfection should be carried out faithfully but outside of the bed, bed linen and nursing utensils, possibilities of infection are very slight. These methods of disinfection are really of value, but fumigation as ordinarily applied accomplishes very little and is unnecessary. Too much stress has been put upon contaminated surroundings and too little upon the patient himself or those persons whom he has exposed. The chief source of infection in contact diseases is not environment but direct or intimate contact with the fresh secretions or excretions of persons who are suffering from diseases in a frank or unrecognizable form, and with carriers.

CALIFORNIA PUBLIC HOSPITAL OPERATES UNDER SLIDING SCALE

By HERBERT O. COLLINS, M.D., Director Fresno County Hospital, Fresno, Cal.

Fresno County, California, has in operation a sliding scale of charges for part pay patients. As is well known there a number of so called public hospitals which although they do not admit the ordinary pay patient, nevertheless makes a small charge to patients who should not be admitted free.

To establish a definite rate for patients often works a hardship on some, and admits others for less than they can really afford to pay. When a sliding scale is adopted and its application left to the unsupported judgment of a social worker or other employe, charges of favoritism are likely to be made, against which defense is difficult.

For those who can afford to pay a little towards their hospital care and for our own protection in refusing admission to some whom we think could afford a private hospital, we have recently worked out the sliding scale of charges printed below.

This scale of charges is not by any means to be considered as inflexible, as the social worker who passes on admissions, is left free to take into consideration all the circumstances of the case, as to whether the patient is the wage earner of the family, the amount of savings the family may have to help tide them over the time, sick insurance, etc. The "scale" therefore is only to be used as a basis of judgment so as to take the process of fixing fees as far as possible away from the field of guesswork.

The amounts designated as the minimum required for existence are based on the computations of Prof. Jaffa of the University of California. Taking Prof. Jaffa's estimate of the minimum sum which should be spent for food for individuals of a given age, and using this as 45 per cent of the total amount required for food, shelter and clothing, we arrived at the necessary family budget. This, however, allows no margin whatever for "extras," such as sickness or hospital bills, and any cessation of income would force the family to seek charity aid. We have added $10 to this income and have used this as the minimum or starting point from which to classify our "pay" patients. Persons having an income below this amount are admitted free.

With this as a basis, Groups, A, B, C, D and E, paying $5, $7.50, $10, $12.50, and $15 per week respectively, and Group F, considered as ineligible for admission to a public hospital, because of apparent ability to pay the regular private hospital fees, have been scheduled at $10, $20, $30, $40, $50 and $60, respectively above the minimum required for existence, according to the schedule. Judgment must be exercised on each individual case.

Charges per week	F Not eligible	E $15.00	D $12.50	C $10.00	B $7.50	A $5.00	Free	Estimated minimum required for living
Man, single	Over (per mo.) $105.00	Over $95.00	Over $85.00	Over $75.00	Over $65.00	Over $55.00	Income below Class A	$45.00
Woman, single	$100.00	$90.00	$80.00	$70.00	$60.00	$50.00		$40.00
Man, woman and baby	$140.00	$130.00	$120.00	$110.00	$100.00	$90.00		$80.00
Man, woman and three children	$190.00	$180.00	$170.00	$160.00	$150.00	$140.00		$130.00
Man, woman and five children	$240.00	$230.00	$220.00	$210.00	$200.00	$190.00		$180.00

THE QUALIFICATIONS AND TRAINING OF HOSPITAL SUPERINTENDENTS*

By A. C. Bachmeyer, M. D., Superintendent, Cincinnati General Hospital, Cincinnati, Ohio

THE trend of popular opinion in favor of institutional care for the sick and injured has kept pace with the progress that has been made in the science of medicine, and the public is rapidly becoming aware of the advantages and necessity for adequate hospital facilities. While the growth and development of hospital service during the last fifty years have been most remarkable and have been particularly rapid during the last few years, it is nevertheless true that the present demand for hospital facilities in many instances far exceeds the supply. The number of hospital beds consequently continues to increase very rapidly and greater expansion is evident.

"A course of training for hospital administrators should primarily give the student inspiration and viewpoint. He should be led to think of the hospital in terms of its relation to the community, to the medical and nursing professions, and to society in general. He should be taught how to interpret the hospital's functions to these groups and co-incidentally (but as thoroughly as possible) be instructed in business administration and in those more or less mechanical and clerical duties of the executive. After a period of twelve or eighteen months spent in intensive didactic and practical instruction, the student should spend further time in an apprenticeship, not however without remuneration."

Though the principal function of the hospital continues to be the care of the sick and injured, additional equally important functions have been developed and today it serves or should serve as the community health center. The hospital, regardless of its size, type, location or affiliation, must function as an educational institution, not only to physician, nurse, sociologist, etc., but to the public in general and should also serve as a field for research if it is to occupy its proper position in the community.

The following statistics concerning the extent and scope of hospital service in the United States at the beginning of 1921 have been courteously supplied by the Modern Hospital Publishing Company.

	1873	1920	Increase
Number of hospitals	149	7,667	5,045%
Number of hospital beds	35,453	695,698	1,862%
Population of United States	38,558,371	105,683,108	194%
Average bed capacity	238	91	

Classification by bed capacity—1920

	Hospitals	% of total
Under 25 beds	3,110	40.56
25 to 49	1,859	24.24
50 to 99	1,263	16.47
100 to 199	781	10.19
200 to 499	405	5.28
500 to 999	116	1.52
1,000 and over	133	1.74
	7,664	100.00

*Read before the annual Congress on Medical Education Licensure, Public Health and Hospitals, Chicago, March 10, 1922.

Eighty-one per cent or 6,232 hospitals have a capacity of less than 100 beds. The distribution of these 7,664 hospitals is shown by the following statements.

In 1920 there were 69 cities of 100,000 population and over, having 1,419 hospitals; 73 cities of 50,000 to 100,000 population with 456 hospitals; 375 cities of 10,000 to 25,000 population with 980 hospitals; and in communities of less than 10,000 population there were 2,960 hospitals. Less than one-fourth of the hospitals of the country are located in cities of over 100,000 population. Only 29 per cent of our institutions are in communities of over 50,000 inhabitants.

These figures are presented in order that we may bear them in mind when considering the subject under discussion. Particular attention is invited to the large proportion of small hospitals, that is, those of less than 100 bed capacity; also to the fact that the majority (187 out of 249) of those of over 500 bed capacity are devoted to the care of persons suffering from mental and nervous disorders.

The importance of the small hospital, when considered in relation to the community it serves, can scarcely be overestimated. Communities of 5,000 population and less are rapidly developing some form of hospital service and are extending that service to the adjacent rural districts. In such communities, the hospital is a vitally important agency in civic welfare. The many discoveries and advances that have been made in the science of medicine, and in the fields of nursing and public health as well, have also served to make the hospital a most important agency in the community.

Because of this hospital administration has become a specialized field of endeavor, calling for executives who can administer the many details of internal organization and who can interpret the institution to the community in terms of service, and by popularizing it increase its usefulness.

The source of supply for executives for these

institutions is very indefinite. Boards of trustees are constantly confronted by the problem of finding suitable officers for their institutions (if one may judge from the number of requests that daily find their way to the desks of the officials of the American Hospital Association, editors of hospital journals and many hospital administrators). While the number of such requests for executives is one index of the situation and probably the most definite that we have, it alone does not indicate the need for a course of training for superintendents. Some one has said that "an increasingly larger number of medical men each year go or drift into administrative work" and the same may be said of nurses and laymen. Because of this "going or drifting" and because in many instances boards of trustees are not cognizant of the proper functions of a superintendent, many institutions are not playing their proper role in the life of the community they seek to serve and are not being properly and efficiently administered.

Considerable thought has been given to a contemplated course of training for hospital superintendents, but as yet opinions and plans have not been crystallized so far as extent of studies and methods of instruction are concerned. A number of individuals throughout the country have been giving attention to the subject and the Rockefeller Foundation is supporting a committee which is now engaged upon a study of the subject, but no definite program has as yet been prepared. The only way in which physician, nurse or layman can enter the field with any training or experience is by means of an apprentice system, in which he or she serves as assistant in one of the larger hospitals for a number of years or enters the hospital employ in some minor capacity and then by promotion wins the superintendency. The number who in this way become available for executive positions each year is very small.

If our colleges can prepare men for other professional and technical vocations they certainly should be able to prepare men and women for administrative positions in our hospitals.

Qualifications of An Administrator

Before entering upon any discussion of a program of training we should endeavor to define the qualifications of a hospital administrator.

The duties of a superintendent have been described on various occasions and the question of his qualifications has likewise often been the subject of discussion. It is difficult, however, to define those qualifications, having in mind the diverse nature of our hospitals and the facts that about 81 per cent of them are of less than 100 bed capacity and that the principles upon which the administration of a hospital of any kind must rest have not as yet been definitely formulated.

One may, however, conclude after careful consideration and from the various papers and the reported discussions that a hospital superintendent should be a mature individual, of clear mind, broad vision and good perspective, having executive ability and initiative. He should possess sufficient knowledge to direct and coordinate intelligently the work of a rather intricate organization and be capable of correlating the hospital with all other agencies in the community that have to do with public health, philanthropy and with medical and nursing education. If in addition to these qualifications the individual possesses a medical education, he has an added advantage, but this is not an essential qualification. It is, however, necessary that he possess a "medical point of view." Personality will play the same important role that it does in all other walks of life. This definition is a rather broad one, but it is applicable to the executive officer of small or large institution.

Purpose and Aim of Training Course

It should be the purpose and aim of a course of training for hospital executives to fit men and women to meet these requirements, and a clear vision of the desired goal should be kept in mind in preparing the course of study. The training should primarily give the student "inspiration and viewpoint." He should be led to think of the hospital in terms of its relation to the community, to the medical and nursing professions and to society in general. He should be taught how to interpret the hospital's functions to these groups and co-incidentally (but as thoroughly as possible) be instructed in business administration and in those more or less mechanical and clerical duties of the executive.

The course of training should first be considered as a whole, and then subdivided into such units or divisions as may be easily administered from point of view of instruction. The many subdivisions must be carefully coordinated and care should be exercised to avoid any endeavor that would seek to make the student an expert in all or any of the subjects covered. In presenting this discussion I am considering the training course as a separate entity and not as part of the curriculum of a school of public health or hygiene, though it might readily be made such. Future development may lead to a more extensive course than that contemplated in this paper and then such affiliation might be highly desirable.

Because of existing conditions, the limited remuneration now being paid the majority of superintendents, the varied type and size of institutions, the course should be restricted to a rather

short period of time. It has been suggested that for these reasons the instruction should not extend over a period of more than twelve or at most eighteen consecutive months. This is probably as long as most of those who have inquired concerning such training could financially afford to spend in preparation.

This precludes the development of any such extensive course for training hospital executives, as that outlined by Mr. Atkins of the University of Chicago for the training of manufacturing executives. If, however, we bear in mind that it is intended to teach so far as possible the elements of hospital administration, to give the student an insight into the various problems and diverse aspects of institutional management, to give him a "point of view" and enable him to give an "ideal worth" to his work, it should be possible to prepare a program of intensive instruction that would provide a broad fundamental training.

Because of the short period of training, the requirements for admission thereto should be carefully considered. Believing that a medical education is of distinct value to the otherwise capable executive, but not an indispensable qualification, I do not believe that matriculation should be limited only to graduates in medicine. Having in mind the statistics concerning hospitals, quoted above, and the very important position of the hospital in the life of the community, we should require that the matriculant possess a broad, general background of preparation. He should have a general knowledge of the business, social and economic world and a degree of maturity of mind commensurate with the position sought. It would probably be well to require that, in addition to such actual school credits as would permit of matriculation into a college of liberal arts, the student have training and experience equivalent to a college degree, and also demonstrate by credentials or otherwise that he possesses some degree of executive ability. Such an outline of requirements necessarily infers that the director of the course must exercise careful discretionary powers and that the admission or rejection of applicants ultimately must rest with him.

Outline of Proposed Course

The development of a course should be as recommended above, to consider first the program as a whole and then subdivide it into such units as are necessary from the point of view of instruction.

It is necessary that the schedule be an elastic one in order that students possessing adequate knowledge of one subject need not spend as much time in the study of that subject as would those not familiar with it and in order that he might instead devote more time and attention to some other phase of the work.

If, at the same time, an arrangement could be effected whereby certain subjects could be covered within a short and definite period of time, special students could be admitted who desire instruction in but one subject. There was such a demand during our brief experience several years ago.

I shall not endeavor to describe definitely the content of the course or extent of the instruction to be given because experience alone, I believe, will indicate how much or how little should finally be included in the course. It would be well to begin with a minimum and permit the training through experience to develop gradually along definite lines.

Dr. S. S. Goldwater, in an article entitled "Self-Education for Hospital Executives," presented an extensive outline of a system of instruction and training which would serve as an excellent foundation for the development of a program.

The present plan at the University of Cincinnati contemplates such development. It is the hope that beginning in the fall of this year a course will be established which will follow Dr. Goldwater's outline and include the following subjects:

1. History:
   - Origin and development of hospitals
   - Extent and scope of hospital service, foreign and domestic
   - Nursing service
   - Dispensary Service
   - Clinical medicine
   - Laboratory sciences
   - Medical education.

   This group of subjects to be covered by different instructors in a general way, dwelling briefly upon history, present practices and tendencies and apparent future development.
2. Sanitation and hygiene:
   Principles and Application.

   It is not contemplated that the student be taught with the detail ordinarily given to the medical or public health student, but a more general idea of the principles involved and their relation to hospital practice. Instruction should be given in food inspection, clothing, ventilation, heating, drainage, etc., and in epidemiology, disinfection and quarantine.
3. Biometry:

   The instruction under this subject to be so designed as to give the student an intelligent idea of methods of statistical studies and an ability to interpret such studies rather than the detailed instruction necessary to undertake such work. He should learn what statistics a hospital should compile and the methods that can be used.
4. Sociology:

   Time will not permit of any extensive instruction in this subject. The student should possess a general knowledge of the subject before entering upon the course. The instruction should deal more especially with medical social questions, as related to hospital practice.

5. Jurisprudence:
Instruction under this subject would in a general way cover contracts, evidence, etc., but more especially outline those legal affairs more closely related with hospital administration, such as the hospital's responsibilities to its patients and visitors to patients, its relation to medical and nursing practice; it also acquaints him with those sections of the various state codes applying to organization and operation of hospitals.
6. Business science:
The instructors here should endeavor to impart a general knowledge of business principles, giving the student something of accounting, banking, definitions and methods of handling capital and operating accounts, administration of trust funds, etc., of cost accounting as applied to hospitals, of budget making, of purchasing and of methods and practices in labor management.
As a result of this course, the student should at least be enabled to know what to expect of a bookkeeper, what statements to call for and how to analyze and evaluate them; how to purchase properly; how to operate a store or supply room and go about the employment and management of hospital personnel.
7. Domestic science:
It is contemplated that under this subject the student will be given the principles and methods of food preparation and cooking, of kitchen management, of the analysis of food and its value in health and disease, and instruction concerning clothing and linens, laundry processes and housekeeping practices, so that he may intelligently supervise the work of subordinates.
8. Building and power plant operation and maintenance:
This subject should cover instruction concerning the maintenance of lands and buildings, operation of power plant, fuel consumption and power production, refrigeration, heating and lighting, maintenance and repair of mechanical equipment and appliances and the various economies that may be practiced. All of this should be with the view of giving the student a general understanding of the subject and not with the idea of equipping him as an engineer or mechanic.
9. Administration:
For lack of a better term, this subject is used to cover such subdivisions as community relations and internal organization, both of which subdivisions must be further divided so as to cover fully the organization and detailed management of the institution. Under community relations the instruction should furnish the student with a proper understanding of what the hospital should mean to the community in general and its relations with all public health, philanthropic and other agencies having to do with the public welfare. Internal organization should cover not only managing boards and domestic departments, but professional services, staff organization, out-patient department management, etc.

Fundamentals Only Can Be Given

The administrator can well utilize all the knowledge he can acquire in any and all of the subjects mentioned, as well as in many others, but time will not permit of more than rather brief instruction in each so that fundamentals only should be given. Proportionately more time would necessarily be given to such subjects as community relations and internal administration and their subdivisions, and through practical training in the departments of different types of hospitals the student should learn methods of application of the instruction given in the didactic courses. It will be impossible to cover any of these subjects in such manner that the student can secure enough information to be considered, even in the remotest sense, to be well informed. It should be every instructor's aim to demonstrate the expanse of each subject to the students and make them realize their own limitations.

Every instructor should be prepared to outline and require students to do extensive collateral reading and ample provision should be made for seminar hours during which the students should be required to lead the discussion.

It would also be well to have a group of prominent hospital administrators serve as special lecturers, each to spend one or more days with the class and in addition to delivering a lecture upon some chosen or assigned topic, lead the discussion in one or more seminar periods.

An affiliation between a group of hospitals of different sizes and types should be effected for the purpose of practical instruction. The students should be passed, by schedule, through the various departments of these institutions in order to observe their operation and learn of the various methods of organization and management. The time spent in each of these departments will probably be too short to permit the student actively to engage in the work or be held responsible for any activities in the department, but if this can be arranged it will react to his benefit. The superintendents of these affiliated hospitals should also serve as instructors or as leaders of seminar periods in order that they may be closely in touch with the course of training, its methods and ideals.

Apprenticeship Should Be Short

After a period of twelve or eighteen months spent in intensive didactic and practical instruction, the student should spend further time in an apprenticeship. This secondary period, however, should not be without financial remuneration and the preliminary training should greatly reduce the time now consumed in apprenticeships before the aspirant to an executive position can be charged with the responsibilities of such office.

Such training should make available to the hospital field, a group of individuals who would be fundamentally trained and thus eliminate the necessity of utilizing as executives persons highly trained in some respects and almost wholly un-

informed in other equally important phases of administration.

In presenting this subject, it is my hope that none will feel that I am submitting fixed opinions or recommendations. My only desire is to stimulate discussion and consideration of what I believe to be one of the most important topics before this conference. The hospital field is becoming an increasingly important one in the life of our nation and if it is to continue to develop and exert its tremendous potential power for good in the progress and upbuilding of civilization we must develop properly qualified administrators.

In conclusion I desire to recommend that the American Conference on Hospital Service, after the publication of the report of the Committee of the Rockefeller Foundation that is now studying the question, take the necessary steps to establish a course for the training of hospital executives in some centrally located university.

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CHECKING UP THE HOSPITAL PHARMACY

By ALBERT S. HYMAN, M.D., Superintendent, Mount Sinai Hospital, Philadelphia, Pa.

FEW departments of the dispensary present greater problems of administration than that of the pharmacy. So far as the small dispensary is concerned there may be few or no difficulties encountered in rendering satisfactory service to patient, doctor, and hospital; but it has long been known that the difficulties found in rendering such a service have apparently increased in the same ratio as the size of the dispensary increases so that the problems of a large dispensary pharmacy may be manifold.

These problems from an administrative standpoint may be roughly classified into three general types: those concerned with the accounting of financial intake from prescriptions sold, those concerned with the accurate checking of all medicines dispensed, and finally those problems concerned with the proper filing and recording of every prescription given out.

In hospitals rendering a prescription service on a stated or fixed fee basis, the financial intake presents no serious accounting difficulties, but where the dispensary draws its clientele from the indigent section of a large city, it becomes necessary to make the fee flexible to a sliding scale. In the latter condition the strict accounting of moneys received may either prove to be impossible or so intricate that its irksome character may be reflected in a lessened capacity for work by the dispensary personnel. In other words, the proverbial "red tape" can cause more harm in this connection than many times the value of the money received.

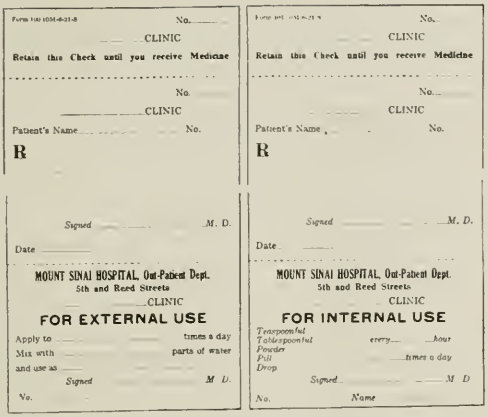
Safeguarding the patient, physician, and pharmacist is, of course, the aim of any checking system that may be installed in the pharmacy. A mistake in any other department of the dispensary may be readily forgiven, but an error in the drug store is said to be conniving with disaster. Fortunately, few mishaps of this kind produce serious trouble since the day of dispensing potent and dangerous drugs for self-administration by the uninformed is practically gone. However, there occasionally arise circumstances whereby the wrong medicine is given to the right patient or the right medicine is given to the wrong patient; in either case there has been a gross miscarriage of administrative duty and responsibility. The anticipation and correction of such a possibility must be at the basis of any checking system that is installed.

Finally, the need for complete recording of all prescriptions issued and their ready accessibility when required for reference form the minimum function of hospital pharmacy administration.

There are many ways of solving the problems which have been presented above. Every dispensary administrator has given much thought and energy to these same problems, and each has developed a method of action which is peculiarly adapted to his own dispensary. Some have evolved a very accurate but laborious program in which additional personnel and many blank forms are required; while others have developed a theoretically correct plan which actually may be impossible to carry out.

A study of the situation has lead us to believe that the more simple the mechanism, the easier it becomes for the dispensary personnel to see that a definite program is adhered to; and in this regard we have found that everything can be accomplished by using one blank form, a facsimile of which is shown on page 343.

This form we have divided into three parts: an upper, middle, and lower. These are called respectively, the check, the prescription, and the



label. The form is adapted for any clinic, the name of the clinic being stamped in the space provided for this purpose. In writing a prescription, the physician in the clinic uses the middle part and also fills out the bottom to which he signs his name. The form is printed on two shades of paper, one to be used for medicines taken internally, and the other for drugs used externally. Both forms are the same except at the bottom where the directions are given.

The patient proceeds to a clerk detailed from the social service department for special work in the pharmacy office. This clerk receives the form and makes a fee according to the financial ability of the patient. The amount is written on the upper and middle blanks and a serial number is stamped on all three divisions. The top is torn off and given to the patient as a "check" for his medicine. The pharmacist then receives the lower and middle blanks and as soon as the medicine is compounded the lower blank is torn off and pasted directly upon the container as a label. When the patient applies for his medicine, he presents his check and the drug clerk having matched the numbers asks the patient's name. In this way a double safeguard is given for protecting both the patient and the hospital from the delivery of a medicine to the wrong person.

So far as the patient is concerned, he is assured of receiving drugs as ordered by the physician, and moreover, the label on the bottle contains the directions in the doctor's own handwriting.

The pharmacist is protected by having on record the original prescription which is filed away numerically each day. He wastes no time in copying either the prescription or the label for the container of the medicine and the opportunities for error are thus minimized. Any prescription can be easily found by the serial number and the first and last numbers for the day give the total number of prescriptions filled.

The auditor's department makes a daily collection and analysis of the checks turned in; the total number of prescriptions, the number given free, those partly paid for, and those fully paid can be rapidly classified. The amount of money received for medicine is easily added up from these checks and can be compared with the actual cash turned in.

This system is offered because of its extreme simplicity and lack of complicated procedures. No originality is claimed for the plan although certain features have been developed which we have not seen in other dispensaries. The universal blank immediately eliminates a large printing bill; the name of the clinic can be stamped in as the blanks are desired. The idea of having the physician fill out his own label appeals both to the patient and the pharmacist; there can be no "passing the buck" in doubtful cases. Much information can be gained from the original prescription; knowing only the serial number of the prescription which is on the label of a bottle which a patient may bring in to refill, one could find out the patient's name and dispensary number, how much he paid for it, who the doctor was, the clinic he was in, and the date the prescription was issued. Altogether, we have found this plan to be very valuable, and it is hoped that others may find something of interest in it.

NATIONAL HOSPITAL DAY PLANS

Hospitals of all sizes and types are showing an increasing interest in National Hospital Day as May 12, the date for the second annual observance of this movement, approaches.

National Hospital Day was originated last year for the purpose of acquainting the public with hospitals and hospital service, and brought many unexpected benefits to the 1,500 institutions throughout the United States and Canada which took part in the pioneer movement. There were innumerable donations of money, supplies and equipment, while a large number of applications were received from high school girls and other young women to whom the "day" so clearly presented the ideals and opportunities of nursing.

The National Hospital Day Committee under whose direction the program for the day is being developed includes the following: Dr. Lewis A. Sexton, E. S. Gilmore, Asa S. Bacon, P. W. Behrens, Pliny O. Clark, Surgeon General Hugh S. Cumming, Dr. Malcolm T. MacEachern, Rev. P. J. Mahan, Norman R. Martin, Dr. W. P. Morrill, Dr. Harry J. Moss, Dr. C. W. Munger, Dr. Geo. O'Hanlon, Dr. J. E. Sampson, Mary C. Wheeler, R.N.

The National Hospital Day Committee has prepared a leaflet detailing the most successful ideas for programs and publicity which were carried out last year, and copies of this material will be sent free to all hospitals which will request it of the Executive Secretary, National Hospital Day Committee, 537 S. Dearborn St., Chicago.

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A HOSPITAL ASSOCIATION WITHOUT A LEGITIMATE FIELD

EVEN a cursory examination of any list of hospitals will reveal the exceedingly important role which hospitals organized and controlled by ecclesiastical denominations are playing in the United States and Canada. The Methodist Episcopal Church, to cite but a single example, has seventy-two hospitals under its jurisdiction. That these institutions should, in the interests of their patients, be conducted efficiently, that the character of their services should steadily improve, and that their efficient management not infrequently involves the solution of definite ecclesiastical problems, goes without saying. For assistance in the solution of these problems—sometimes financial, sometimes ethical—the individual hospitals may rightly look to their national church bodies for help. For purposes of practical administration it seems highly desirable for each denomination to organize a separate bureau or association through which it may bring the influence and resources of that denomination directly to bear upon its hospital problems. Such an organization the Methodist Episcopal Church has in fact in the Methodist Hospitals and Homes Association. The chief objectives of this organization are to serve as an open forum for the discussion of all matters pertaining to the Methodist Episcopal hospitals and homes; to secure the betterment of its hospitals and homes and thereby provide efficient service for all who come into them; to collate the best methods for handling hospital and home problems; and to work out detailed plans for accomplishing these results.

We understand, moreover, that the General Assembly of the Presbyterian Church has appointed a committee to consider the establishment of a hospital bureau. Other church bodies may have similar plans in mind.

The organization of these denominational hospital associations and bureaus is a step in the right direction. But while we recognize the high ideals of service which animate Mr. Pliny O. Clark, the president of the Protestant Hospital Association, and other officers of this organization, we entertain grave doubts as to whether it can be said that the organization of the Protestant Hospital Association is a step in the right direction. For it is difficult to conceive of the Protestant Hospital Association attaining any object which cannot be accomplished just as expeditiously and effectively, if not more so, by the American Hospital Association. Aside from the activities of denominational hospital bureaus there are few, if indeed there are any, activities which the Protestant Hospital Association may conceivably carry on that are not within the scope of the American Hospital Association. At this early stage of its existence, the Protestant Hospital Association is unnecessarily duplicating some of the legitimate activities of the American Hospital Association. This was strikingly evident at the West Baden meeting last year, when the Protestant Hospital Association, instead of confining itself strictly to ecclesiastical aspects of the hospital field, discussed at great length many general problems later considered in the various round tables of the American Hospital Association. Indeed the meetings of the Protestant Hospital Association, to a critical yet sympathetic observer, clearly demonstrated how closely the interests of the two associations coalesce and how difficult it is for the Protestant Hospital Association to find a legitimate field of its own.

Since many of the denominational hospitals are already members of the American Hospital Association, and all who are eligible should be members, would it not be far wiser, instead of maintaining a separate organization to inaugurate within the American Hospital Association a section on church affiliations, the function of which would be to deal with such aspects of the hospital field as are distinctly ecclesiastical in character?

This would serve to build up, rather than to detract from, the American Hospital Association, and at the same time would offer denominational

hospitals an adequate piece of machinery for transacting the business to which their church affiliations give rise.

NATIONAL HOSPITAL WEEK

AT THE annual meeting of the American Conference on Hospital Service at Chicago on March 9, a beginning was made toward inaugurating what will be known as National Hospital Week. During this week—the week in which Florence Nightingale's birthday falls—a well planned, nation-wide effort will be made to draw the attention of the public to our hospitals, their place in the community, the services they render and their financial and other needs. What this may mean in the long run for the hospitals of this country and Canada, time alone will tell; that it has great potentialities must be evident to anyone who gives the matter even superficial consideration. Indeed, we have very tangible evidence of these possibilities in the widespread, almost spontaneous, interest the national hospital day committee was able to arouse in our hospitals through the observance of National Hospital Day. For this initial step no small amount of credit is due the hospital day committee. Taking into consideration, however, the varied aspects of the hospital field calling for attention and emphasis, and the large number of national organizations that are seeking to promote the best interests of the field, it seems desirable not only to enlarge the scope of this annual observance from a day to a week, but also to have it sponsored by the fifteen great national organizations that comprise the American Conference on Hospital Service.

The observance of Hospital Week will give our hospitals, particularly the smaller institutions, a better opportunity than they have ever had to acquaint the rank and file with their purpose and work and to overcome whatever prejudices may still remain. The past decade has witnessed a great change of attitude toward hospitals; they are no longer regarded with dread and abhorrence. The attitude of not a few, however, still needs to be changed. The activities of Hospital Week, if rightly directed, may do much to bring this about. Many persons, moreover, still need to be informed as to the exact role the hospital is meant to play in the community and as to the facilities and services it has to offer in playing that role. What better opportunity could there be than a week given over to newspaper publicity, meetings, demonstrations, graduating exercises and other activities, to carry the message of the hospital to its community.

Some of the ways in which this may be done were touched upon briefly by Dr. Billings in placing the suggestion before the Conference in his opening address (See page 382). It will rest with the National Hospital Week committee which Dr. Billings was authorized to appoint, to work out these plans in detail and to devise other ways and means for realizing the aims of the movement.

TRUSTEES LIABLE FOR NEGLIGENCE OF INCOMPETENT PERSONNEL

"WE ARE convinced that sound reasons sustain the great weight of authority to the effect that a public charity should not be held liable for the negligence of the servant in whose selection the hospital and its managers have exercised due care. On the other hand such an institution is liable when it fails to exercise such care."

In these words the Supreme Court of Ohio upheld a verdict against a public charitable hospital for damages caused by an incompetent nurse. The decision is not a new one in American courts but it is one of the most unequivocal declarations yet made limiting the exemption from liability of charitable hospitals. The courts of New York, Texas, Washington, Rhode Island, Kentucky, Maine, and New Hampshire had held similarly that "the general principle protecting charitable institutions from actions for negligence does not include negligence that results in the service of incompetent, unskilled, or careless servants."

On the other hand the courts of Massachusetts, Missouri, Pennsylvania, Tennessee, South Carolina, Michigan, and Illinois, have upheld the view that charitable institutions are exempt from liability for negligence. The Massachusetts Supreme Court went so far as to say that "a public charitable hospital is not liable for negligence of its managers in selecting incompetent subordinate agents, any more than it is for the negligence of subordinates selected with care." The conclusion of most of the courts favoring the view is stated thus: "When a public corporation has no property or funds but what have been contributed for a special charitable purpose, it would be against all law and all equity to apply the trust funds thus contributed to compensate injuries inflicted by the negligence of its agents and servants."

Sweeping aside the above doctrine and also the doctrine that patients who accept the care of the hospital waive the right to damages for negligence, the court declares, "It (the hospital) cannot watch or control the countless acts and movements of its servants, but it can and should exercise care to see that only careful and competent servants minister to stricken patients who are within its walls."

"Moreover, while it may well be said that donors of funds for the praiseworthy objects of charitable hospitals do not contemplate the diversion of the funds for the payment of damages for the numerous acts of servants referred to, yet they necessarily realize and appreciate that they give their donations to those who have the management and control of the institution, and that every principle of justice requires that they use care in the development and maintenance of the property and in the selection of servants who have the oversight of patients." The court further quotes approvingly from a North Carolina case where it is said: "The beneficiaries of charitable institutions are the poor who have very little opportunity for selection and it is the purpose of the founders to give to them skillful and humane treatment. If they are permitted to employ those who are incompetent and unskilled, funds bestowed for benefits are diverted from their true purpose and under the form of a charity they become a menace to those for whose benefit they are established."

The decision in Ohio may be overruled as to the particular case upon rehearing; the legislature may specifically exempt charitable institutions from all liability which again is an extremely doubtful possibility; the courts of other states may follow the view of non-liability held in Massachusetts, instead of the view in this case. But in the meantime the decision gives ground for speculation as to its effect.

The decision obviously has a direct and practical importance for hospital administrators. *The decision fixes responsibility upon the governing board of charitable hospitals to exercise due care in the selection of their superintendents, physicians, surgeons, nurses and servants who deal with the sick. It is a responsibility which cannot be delegated with safety. It disposes of the question of selection or control of assistants by anyone but the trustees; they alone are responsible for the safeguarding of their trusteeship. The superintendent assumes an added importance by virtue of his position as executive officer for the board of trustees.*

With the liability for negligence of incompetent assistants menacing them, will not the trustees be compelled to exercise control over the selection of the medical and surgical staff, as well as the staffs of all other departments? How will it affect the open staff, or a staff selected by the physicians of the hospital?

Though responsibility is fixed upon the governing board, there are certain advantages which accrue to the board. If it has the responsibility can it be limited in its rights? Can the law compel a hospital to open its staff to any person or form of medical practice without the consent of the governing board? Would it not be against all equity to compel a board to select anyone for a duty when the board is responsible for the safeguarding of its trust against negligence or incompetence? What, therefore, becomes of the proposed legislation compelling open staffs in all hospitals? Would it not be void because of a direct interference with the rights of the governing board in safeguarding the trust for which it is responsible?

THE OCTOCENTENARY OF A GREAT HOSPITAL

THERE is a certain element of romance about the projected octocentenary of St. Bartholemew's Hospital, London. The England of Henry I, just returning to normalcy after the Conquest; the vision and vow of the Royal Minstrel, Rahere; the foundation of the Augustinian Canons and the beginnings of St. Bartholemew's Fair, these appeal to the imagination. Four centuries of existence as a religious-medical house and four centuries of life as a strictly medical institution and all the traditions and charm of these 800 years carry with them a lure for us of the new world. Perhaps no institution in English-speaking countries has exercised so great an influence on medical thought as has Bart's, certainly since the granting of its charter by Henry VIII, its force has been unmistakable.

The committee, of which Lord Stanmere is the chairman, plans to hold a celebration in the spring of 1923 to bring the history and usefulness of this venerable institution before the public and without doubt very considerable additions will thus be made to the history of medicine. The American Hospital Association should participate therein since it will be the means of bringing to it an immeasurably profitable inspiration. Also it will cement more strongly our medical ties with the mother nation to whose ideals we owe such a great debt.

In the labor of creating and upbuilding of our modern hospitals, we of America are apt to forget the value of historical documents and the influence they will have upon posterity. Some of our institutions will one of these days be holding octocentenaries and if we build our archives against that day, our medical descendents will rise up and call us truly blessed.

Establish Medical Clinic.—The provincial executive council of Alberta has established a medical clinic at the Stratchoma Hospital in Edmonton, the work being supervised by the medical faculty of the University of Alberta and the government department of health. Indigent cases will be treated at the clinic and it will be available for general consultative work throughout the province. The Stratchoma Hospital is leased by military authorities.

MINNEAPOLIS HOSPITAL ENTERS THE MOVIES

By WALTER E. LIST, M.D., Superintendent, Minneapolis General Hospital, Minneapolis, Minn.

MOVING pictures can be used to excellent advantage in educating the public as to hospital procedure in rendering medical and nursing service. Pictures of the Minneapolis General Hospital will be shown in many of the theaters of this city and at the various club meetings, the idea being to popularize the hospital and to allay the fear, suspicion and prejudice that may exist due to lack of knowledge of hospital technique.

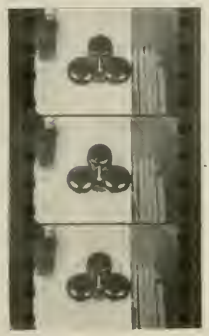
Various methods must be used in selling the hospital to the community, and the superintendent must exercise every precaution to avoid discharging dissatisfied patients.

Favorable newspaper publicity, public talks and moving pictures are extremely valuable but with these means alone one can not succeed, because in the final analysis it is the service to the patient that really builds the foundation of accomplishment.

Considerable difficulty will be encountered in the approach of the various movie theater owners, in that they regard a hospital picture as advertising. With this in mind, an interesting story must be conceived in order to make it educational and in this way attract the attention of theater managers.

The following is a resume of the pictures of the Minneapolis General Hospital:

A STORY OF SERVICE BY THE MINNEAPOLIS GENERAL HOSPITAL



Scene 1

GENERAL HOSPITAL GARAGE

(Close up. Fade in.)
Wall telephone ringing violently.

Scene 2

GENERAL HOSPITAL GARAGE

(Semi-Close up.)
Ambulance driver answers phone.

Scene 3

GENERAL HOSPITAL GARAGE

Ambulance driven out of garage, slows down to take on doctor who comes into scene. Ambulance speeds off.

Scene 4

CITY STREET

Man sits on curb holding Child who has been struck by automobile on his lap, crowd stands around. Ambulance drives up. Doctor gives Child a hurried examination and he and ambulance driver lift her on stretchers and put her into ambulance. Father also enters ambulance. Ambulance drives off. Fade out.

Scene 5

RECEIVING WARD—EXAMINATION ROOM

(Fade in.)
Everything in readiness for an emergency.

Head nurse, pupil nurse and doctor in room. Child is brought in on stretcher, doctor and nurses busy themselves with patient.

Scene 6

X-RAY ROOM

The x-ray and laboratory verify the doctor's diagnosis. There is no guess work.

Child on table having x-ray taken. Doctor and x-ray nurse in charge.

Scene 7

LABORATORY

(Long Shot)

General view of room, showing workers performing various tests.

Scene 11

LIVING ROOM NURSE'S HOME

(Long Shot)

Although the days are busy ones for the nurses, there is still time for play.

Group of nurses around piano singing, others reading and chatting.

Scene 8

HALLWAY—STATION A

An important consultation.

Doctor at desk talking to parents of Child, who are seated. Doctors answers parent's questions carefully and talks to them in a kindly way.

Scene 12

CORNER OF MEN'S WARD

Hospital days now pass quickly.

Occupational worker, showing bed patient how to make baskets; man in wheel chair is making scarf. Other bed patient is putting finishing touches on a lamp.

Scene 9

OPERATING ROOM

Parents consent to necessary operation, which is performed by a specialist.

Child is brought in, placed on table and preparations are made for leg operation by nurses and doctors. Fade Out. Iris Out.

Scene 13

CORNER OF CHILDREN'S WARD

Children in their chairs form a semi-circle; accident child in foreground. Some children are drawing, others doing cut-out work. Volunteer directing them. She asks children if they would like a story, they are delighted, stop work and listen intently to reading of story. Iris Out.

Scene 10

CHILDREN'S WARD.

(Iris In)

Convalescing.

Three nurses busy with children, one taking Child's temperature, another nurse giving medicine, a third giving a patient water.

Scene 14

HOSPITAL AUDITORIUM

Charlie Chaplin and Mary Pickford are among the Wednesday night entertainers.

Patients gathering for motion picture entertainments; some in wheel chairs, some on trucks, others being helped by doctors and nurses. Show auditorium filled. Fade In.

Scene 15

HOSPITAL AUDITORIUM

(Semi-Close Up)

Motion pictures screen presenting Mary Pickford in "Hoodlum."

Five or six old men grinning and showing that they are enjoying the film immensely. Fade Out.

Scene 16

HOSPITAL INFORMATION DESK

Visiting time, a popular hour.

Many visitors standing around desk, clerk gives passes to Child's parents and then to others.

Scene 17

CHILDREN'S WARD

(Semi-Close Up)

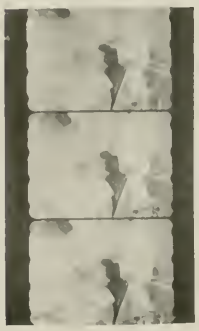
Child sitting in wheel chair, parents come into picture, delighted to see that she is up. Doctor comes into picture. Parents thank him for what he had done. He points to child's teeth showing they need attention. They indicate anything he wishes to do is right with them.

Scene 18

DENTISTRY

The teeth a vital part of every examination.

Child in dental chair, dentist working on teeth, dental nurse in attendance. Fade Out.



Scene 19

CHILDREN'S WARD

(Semi-Close Up)

A leg as good as new.

Child being dressed for street by nurse, she shows parents that she can walk as well as ever. Parents express gratitude to doctor and nurse. Go off with Child.

Scene 20

A CITY STREET

The work of the hospital is not done however for the social service department follows the child into the home to see that the doctor's instructions are followed and that recovery is complete.

Social worker approaches cottage.

Scene 21

COTTAGE DOOR

(Semi-Close Up)

Social worker knocks on door. Mother of Child opens door and welcomes worker.

Scene 22

COTTAGE LIVING ROOM

Simple home of working people.

Child runs up to worker, mother invites her to sit down, worker asks in friendly way about Child. Fade Out.

MINNEAPOLIS GENERAL HOSPITAL

(Iris In)

The Minneapolis General Hospital is your hospital. Its watchword is *service* to the people of Minneapolis.

Scene 23

Nurses and doctors grouped at hospital entrance. Iris Out.

INDIANA PROGRAM ANNOUNCED

The Indiana Section of the American Hospital Association will hold its annual meeting at the Claypool Hotel in Indianapolis on April 19. The following tentative program has been arranged:

Invocation, Rev. Lewis Brown.
President's report, Dr. George F. Keiper.
Treasurer's report, Mrs. Ethel P. Clarke, R.N.
Secretary's report, Miss Anna Medendorp, R.N.
Reports of committees.
Other business.

"Methods of Serving Food to Patient," Miss Mary J. Davis, City Hospital, Indianapolis.

"The Relation of the Hospital to Anesthetics," Dr. Charles Combs, Terre Haute.

"Phase of Standardization as Dealing with the Complete Record of the Patient," Dr. Arnette, Lafayette.

"Follow-up Work of the Social Service Department," Robert E. Neff, Long Hospital, Indianapolis.

"Value of Recruiting Campaign," Miss Mary Gladwin, R.N.

"Some Phase of the Nursing Problem," Mrs. Ethel P. Clarke, Long Hospital, Indianapolis.

"Financing Schools of Nursing," Miss Goodrich, Teachers' College, Columbia University, New York.

"Laboratory Work in Small Hospitals," Dr. J. H. Warvel, Methodist Hospital, Indianapolis.

INFORMATION ON NEW YORK HOSPITALS

Last month saw the establishment in New York of the Hospital Information Bureau in the New York Academy of Medicine Annex Building, 17 West Forty-third Street. Dr. E. H. Lewinski-Corwin, executive secretary of the Public Health Committee of the Academy of Medicine, has been appointed director.

The purpose of the bureau is to keep in touch with hospital work and progress in New York City, to furnish information to all interested in administration, record keeping and other facts of hospital work, organization and facilities; to study and make known the hospital needs of the city, to prepare exhibits, to maintain a library of hospital reports and to promote uniformity in hospital reporting.

REPORTS CASE OF MALINGERER

Miss Margaret White, alias Mrs. Ryan, of Denver, Des Moines, Sioux City, Minneapolis and other cities was a docile patient at Rockford Hospital, Rockford, Ill., until recently when her daily rations of morphine were reduced from two grains to one-half grain. She then sought discharge but was detained by Superintendent S. G. Davidson until federal authorities in Chicago failed to report interest in her case. Superintendent Davidson and his staff believe her to be a malingerer who obtains hospitalization for the purpose of obtaining morphine.

INCOME TAX RETURNS OF EMPLOYES

The Internal Revenue Bureau of the Treasury Department in its June, 1921, bulletin issued the following ruling in relation to income tax returns of hospital employes:

"When the employes of a hospital are subject to immediate service on demand at any time during the twenty-four hours of the day and on that account are required to accept quarters and meals at the hospital, the value of such quarters and meals may be considered as being furnished for the convenience of the hospital and does not represent additional compensation to the employes.

"On the other hand, where the employes are on duty a certain number of hours each day and could, if they so desired, obtain meals and lodging elsewhere than in the hospital—and yet perform the duties required of them by the hospital—the ratable value of the board and lodging furnished is considered additional compensation. (20-21-1634: O.D. 915, June, 1921, Cumulative Bulletin, Page 85)."

LETTER WRITING IN HOSPITAL PUBLICITY

Mr. Ralph Welles Keeler, director of publicity committee of the Methodist Hospitals and Homes, in speaking on "Hospital Publicity," said in regard to letter writing as a channel of publicity: "The letter-writer propagandist of today must be more than a mechanic. He must be able to write real letters. His form letters to district superintendents and pastors cannot be composed with careless abandon. He must have something to say and be able to say it well. His letters to laymen must breathe personality. There must be a different appeal to men and women. His letter to young people must show that he appreciates the difference in viewpoint and outlook between youth and old age. Letters about the sick must be thoughtful and sympathetic. In other words, propaganda letters, must be personal—decidedly, humanly personal.

"It seems hardly necessary to say that mailing lists should be kept right up to the minute. A patron of a hospital or home likes to think that your interest lasts long enough to see that his initials, the spelling of his name, and his street address are correct.

"In the answering of letters there should be great care. For here are unexpected channels of publicity. Both the letter of thanks and the response to criticism should be of the most intimate, careful nature."

ETHER STUDIES*

By ALLAN WINTER ROWE, S.M., Ph.D., Chemist, Massachusetts Homeopathic Hospital, Boston

In the first of two articles on anesthetic ethers, Mr. Rowe, chemist at Massachusetts Homeopathic Hospital, Boston, discusses certain tests used by him as a basis of a routine procedure for the determination of the suitability of ethers for anesthesia.

The specific gravity, aldehyde and peroxide tests, herewith described, themselves furnish enough information to warrant the rejection of ethers to be used for anesthesia, according to the author. The probability of contamination of the ethers by metal containers is suggested by him.

Current practice at the Massachusetts Homeopathic Hospital is to buy ether in lots of 100 pounds or more, and on receipt of the shipment to send one or two pounds to the laboratory for examination. If the report is unfavorable the ether is returned to the manufacturer.

SOME eighteen months or more ago as the result of repeated complaints by anesthetists concerning the character of anesthetic ethers, the quality of anesthesia produced by them, and the after effects of an undesirable character noted in a number of cases, the writer undertook a study of the ethers vended by the group of firms generally recognized as handling a standard product for the purpose of ascertaining if there were any demonstrable ground for such complaints.

That anesthetic ethers might contain impurities of a deleterious character has been freely recognized and commented on at length in scientific literature. In 1911 Baskerville and Hamor (*Journal of Industrial and Engineering Chemistry*, Vol. 3, Nos. 5 and 6, 1911) as a part of an elaborate study on anesthetics subjected the various chemical and physical tests applied to ethers to thorough critical examination, demonstrated the validity of certain tests and established certain standards of purity. A review of this and other works showed that the performance of a group of relatively simple tests would demonstrate with minimum possibility of error the suitability of an ether for anesthetic purposes.

The application of these tests to the ether at that time in use in the hospital showed it was entirely unfit for the purposes for which it was sold. Recognizing the certainty that ether would undergo definite deterioration on standing and that an ether entirely suitable for anesthesia at the time of leaving the factory might through the changes incident to storage become entirely unfit for this purpose by the time it reached the operating room, the subjection of samples from all lots of ether purchased was made a routine procedure. The study has led necessarily to the consideration of many other factors involved in the general problem of pure anesthetic ether, and several investigations are now under way. The experience in this laboratory, however, has been of such a character as to warrant this preliminary communication for the information of hospitals and others making use of anesthetic ether and of defining for them certain standards to which ethers should conform. No essentially new material is presented but the necessity of routine examination for purity of anesthetic ethers is demonstrated. The tests and methods employed will be taken up in the next section.

1. *Specific Gravity.* The specific gravity of an absolutely pure anhydrous ether is usually given as 0.7178 when taken at 15 degrees in comparison with water at 4 degrees or, as it is usually written, 15°/4°. As has been pointed out, however, by many writers, water-free ether is extremely hygroscopic and immediately on exposure to air absorbs enough water to increase the specific gravity to from 0.720 to 0.721. When the latter figure is reached, the further increase in specific gravity is a relatively slow one. As such small quantities of water will produce so definite an influence on the specific gravity and, further, as alcohol, a usual contaminant, also tends to raise the density, the determination of this physical constant is an important test, giving evidence of the relative purity of the material.

Exact densimetric determinations are difficult to make. Sources of error are numerous, and the operation bespeaks a time consumption disproportionate to the accuracy usually obtained. This is particularly true in dealing with so volatile a liquid as ether. Experiments were made with the Westphal balance to ascertain if this rapid procedure could be utilized in this connection. The technic as developed is as follows: The ether at a temperature as near 25°† centigrade as possible is placed in a silvered Dewar flask of cylindrical shape and the specific gravity rapidly determined by an accurately calibrated and standardized Westphal balance. As the variation of the observed specific gravities is within very narrow limits, it is possible to assemble the balance, placing the heavy weights in position, and securing final equilibrium by the movement of only one of the riders. The temperature before and after the determination is taken by a thermometer placed in the liquid during the measurement, there being no appreciable change within the limited time consumed by the measurement.

Pycnometer Used to Check Results

During the earlier work each Westphal balance determination was checked by means of the pycnometer, and the concordance invariably observed warrants amply the confidence placed in these measurements. As it is difficult to secure a reading at exactly 25°, the temperature coefficient was determined both by the Westphal balance and with the pycnometer. It is to be noted that the Westphal balance gives comparisons between the liquid under investigation and water at the same temperature. In other words, the Westphal balance is usually constructed to give accurate readings of specific gravity at 15° as compared with water at 15°. By means of the pycnometer, density determinations were made on ether at 15° and 25°, compared with water at the same temperature. These showed a difference in the density for this 10° range of .008 or .0008 for each degree below 25°, assuming uniform rate of change. The change in volume of the Westphal balance plummet would not be identical with that of a similar amount of water, but the change in the density of water over this particular range is only

*This is the first of two papers written for The Modern Hospital by Mr. Rowe.

†This temperature more nearly approximates that of the usual laboratory than the 15° standard, and the advantage of dealing with a thermally homogenous ether more than compensates for the increased volatility.

.002, which would be the magnitude of the error introduced in the determination of this temperature coefficient should the plummet show no change of volume over the 10° interval. As, however, the plummet does experience some expansion, this operates to lessen the difference and reduce the figure somewhat. Furthermore, as the maximum variation from the 25°/25° standard adopted was never more than 2°, the maximum value of the error of the temperature correction would be of the order of .0004, which falls well within the accepted error of observation.

As this method is so easy of application, practical in operation and requires no great measure of technical skill, it is felt that it offers a most satisfactory procedure for the determination of this quantity for the purposes under discussion. As the specific gravities usually given are determined at 15°/4°, the values at 25°/25° must be calculated for purposes of comparison. Ether having a specific gravity of 0.718 at 15°/4° gives the value of 0.711 when determined at 25°/25°. The value of 0.721, the usually accepted upper limit, similarly becomes 0.714.

Distillation Test Better than Boiling Point

2. *Boiling Point and Distillation Test.* The boiling point of pure anhydrous ether under standard conditions is usually given at 34.6°. The determination of this quantity, however, is not as valuable as at first sight it might seem to be, as the two chief sources of contamination, namely, water and alcohol, operate respectively in opposite sense to each other on the boiling point of the mixture. In other words, water lowers and alcohol raises the boiling point, and an ether might contain appreciable amounts of both contaminants and show a normal boiling point while small amounts of one or the other might produce a notable change. The fractional distillation of the ether, on the other hand, gives more information regarding the purity. Baskerville and Hamor state that at least 97 per cent by volume should distill between 34° and 36°. In their fractionations, quantities equivalent to about 1 per cent distilled over below 34°, the great bulk of the ether, as already stated, between 34° and 36° and only small residual amounts of the order of 1 or 2 per cent over above the latter temperature. They state that in any case the entire sample should distill below 37°.

To carry out this fractionation with any degree of accuracy requires a properly designed still head and distillation apparatus, a highly accurate thermometer, a good barometer to indicate fluctuations of the atmospheric pressure and the exercise of a considerable degree of care to avoid super-heating of the vapor and consequent misleading results. Baskerville and Hamor in their frequently cited article define the conditions for the performance of the test, but even when the precautions are observed, in the hands of any but a skilled worker the test is far from accurate.

While the boiling point and distillation tests have been applied as part of the routine procedure, great weight has not been laid upon the indications of the test. The inclusion of a certain amount of alcohol in anesthetic ether is to be regarded as a not undesirable practice, certainly if the ether is to be used by the drop method. Again, many anesthetists follow a technic in which the ether vapor is partially saturated with moisture prior to administration so that the inclusion of small amounts of water per se is not to be regarded as primarily deleterious. The economic aspect is of course a factor, and the inclusion of gross amounts of water would render the ether undesirable from this standpoint.

The experience in this laboratory, however, offers no basis for an assumption that in any high grade anesthetic ether such gross contamination is ever found. Finally, the hygroscopicity of an anhydrous ether, already referred to, leads to contamination of material in the act of transference, and while this is not serious, it negatives the necessity of an exact distillation test. For purposes of rough comparison, a long necked distilling flask coupled with a twenty-four inch Liebig condenser has been used in this laboratory, and the indications of the test regarded as interesting rather than definitive. In the writer's opinion, this test could be omitted without serious prejudice to the accuracy of the conclusions drawn from the routine examination.

Presence of Aldehyde Excludes Ether

3. *Aldehyde.* It has been shown by numerous writers that dry oxygen in molecular combination exercises a chemical influence upon pure high grade ether with the formation of a progressive series of oxidation products. In the first place, there is the possibility of the direct formation of hydrogen peroxide by the union of atmospheric oxygen with water. The peroxide then could act upon alcohol to form acet-aldehyde, the peroxide of the same, acetic peroxide, and ultimately acetic acid. The ether itself is susceptible of peroxide formation under the influence both of oxygen and of hydrogen peroxide, while the acetic acid could pass over the peracetic acid. The decomposition of the former would liberate free oxygen; of the latter would regenerate the hydrogen peroxide. A continuous and vicious cycle is hereby set up with the formation of aldehydes and of acids with intermediate peroxide formations.‡

It is well recognized that aldehydes exercise an irritating effect on the respiratory passages and that their inclusion in ether for anesthesia is entirely undesirable. The test for aldehyde then is to be regarded as one of exclusion and a positive response an index of unfitness of the sample for anesthetic purposes. A large number of tests have been suggested for the determination of aldehyde. In the papers by Baskerville and Hamor, already cited, a careful analysis and comparison of these tests have been made. The potassium hydroxide test specified by the majority of pharmacopoeias in one or another form seems on the whole to be the most satisfactory for a routine determination. The technic recommended by Baskerville was followed:

"On covering five grams of solid potassium hydroxide in freshly broken pieces about 5 millimeters in diameter with 30 cc. of ether and allowing the mixture to stand for six hours tightly closed and protected from light and with occasional shaking, the potassium hydroxide should not acquire a yellowish or brown color, no colored substance should separate, and the ether should not become turbid nor assume any color." The test in this form was applied as a matter of routine. It may be said in passing that in very few of the ethers examined has aldehyde contamination been a factor. The theoretical implications will be discussed in a later part of the paper.

Peroxide is Also Deleterious

4. *Peroxide.* As was stated in the preceding section, contamination from peroxide will arise when pure ether, or more especially ether containing a trace of moisture, remains in contact with atmospheric oxygen. Peroxide contamination is both directly and indirectly deleterious, it possessing in itself a definite irritant action on the respiratory passages and its presence conditioning and

‡A brief and lucid discussion of these points is given in the paper by Baskerville and Hamor.

expediting the formation of highly undesirable oxidation products. One of the characteristic reactions of all peroxides is the liberation of iodine from the inorganic iodides. Potassium iodide is decomposed with the liberation of iodine but as solutions of this compound are not entirely stable and as atmospheric oxygen held in solution will also in time produce decomposition, the compound potassium iodide—cadmium iodide—in 10 per cent solution as recommended by Baskerville and Hamor was adopted as the standard reagent. Ten cc. of ether and 2 cc. of the reagent were used for the test. A few drops of starch solution sensitizes the test materially, but should only be added after a suspected yellow color has developed as a means of confirmation. The cadmium potassium iodide is unaffected by the factors of disturbance which invalidate potassium iodide alone. As the liberation of iodine is slow in the presence of small amounts of peroxide, the test is regarded as negative only when no iodide is liberated at the end of one hour.

5. *Acidity.* Among the final stadia of the progressive oxidation changes, acid formation has already been noted. The gross contamination by the sulphuric acid used in the process of manufacture is hardly conceivable, but the formation of acid oxidation products of alcohol is possible in an ether which has been stored for a long period of cohols and their products, the so-called "heavy oil of wine," indicate their presence at this point with considerable sensitiveness. This test was added to the general routine procedure, any odor being regarded as an exclusion test.

The following analysis is taken at random to illustrate the laboratory report:

REPORT ON ETHER (Anesthetic).
October 8, 1921.

No. XX.
Firm F

Analysis

Specific Gravity—0.715 @ 23°
0.713 @ 25°
Distillation Test—34° — 36° 90%
37° 10%
Aldehyde Test— Slight amount of white separate. Ether turbid.
Peroxide Test— Positive at once.
Acidity— Negative.
Odor— Negative.

Opinion

The sample is unfit for anesthetic purposes, due, in the first instance, to peroxide content.

Chemist.

The results of these routine examinations can best be considered if placed in tabular form. In the following table the manufacturing firms are designated by letter. All specific gravities are given corrected to 25°/25°.

No.	Date.	Firm.	Sp. Gr.	B. P. Dist.	Aldehyde.	Peroxide.	Acid.	Odor.	Disposition.
1.	5/5/20	A	0.712	34.8/36° 98%	O	O	O	O	Accepted
2.	12/5/20	A	.712	34.4/36° 90%	O	+ at once	O	O	Rejected
3.	19/5/20	A	.712	34/36° 96%	O	+ (30 min.)	O	O	Rejected
4.	9/7/20	B	.715	34.4/36° 80%	+	+ at once	O	O	Rejected
5.	3/8/20	B	.715	34/36° 70%	Turbid	+ (4 min.)	O	O	Rejected
6.	13/8/20	A	.711	34/36° 90%	O	O	O	O	Accepted
7.	13/8/20	C	.713	34/36° 80%	O	O	O	O	Accepted
8.	19/8/20	A	.714	34/36° 50%	O	O	O	O	Accepted
9.	27/8/20	D	.715	34.34/36° 50%	Turbid separate	O	O	O	Rejected
10.	30/8/20	E	.713	35.3/36° 50%	Turbid	O	O	O	Rejected
11.	11/10/20	C	.715	34.4/36° 65%	Turbid separate	O	O	O	Rejected
12.	1/3/21	C	.714	34.5/36° 50%	O	O	O	O	Accepted
13.	1/8/21	C	.714	34/36° 50%	O	O	O	O	Accepted
14.	2/8/21	C	.713	34/36° 60%	O	O	O	O	Accepted
15.	19/9/21	C	.713	34.8/36° 50%	Turbid separate	+ at once	O	O	Rejected
16.	26/9/21	A	.713	34.2/36° 60%	O	O	O	O	Accepted
17.	7/10/21	C	.713	34/36° 90%	O	O	O	O	Accepted
18.	8/10/21	F	.713	34/36° 90%	Turbid separate	+ at once	O	O	Rejected
19.	11/10/21	C	.714	33/36° 98%	O	O	O	O	Accepted
20.	19/10/21	F	.712	34/36° 50%	Turbid	+ at once	O	+	Rejected
21.	1/11/21	C	.712	32.5/36° 98%	O	++ at once	O	O	Rejected
22.	1/11/21	C	.714	34.2/36° 90%	O	+ at once	O	O	Rejected
23.	3/11/21	C	.714	32.5/36° 85%	O	O	O	O	Accepted
24.	3/11/21	C	.714	34.2/36° 97%	O	O	O	O	Accepted
25.	5/11/21	G	.711	33.6/36° 95%	O	O	O	O	Accepted

time. Again, however, it would be hardly possible for the acid from this source to be present and not find very appreciable quantities of the intermediate aldehyde and peroxide compounds. The acidity test has been included in the routine more as a matter of completeness than as a final criterion for exclusion. During the first determinations titrations of the acidity were made with N/100 potassium hydroxide and phenol phthalein as an indicator, following the modified Vulpius technique, the results being expressed in terms of acetic acid. As the results thus obtained showed in no instance more than a minimal trace of acid, the simpler and for this purpose equally satisfactory method was adopted of allowing 25 cc. of the sample to evaporate at room temperature and after the addition of 5 cc. of distilled water to the residue, testing the resulting solution with pale blue litmus paper.

Odor Test is Quick and Rough

6. *Odor.* Another quick and rough test which none the less is highly informative is made by allowing 50 cc. of the sample to evaporate on a piece of filter paper contained in a flat glass dish (a Petri dish cover is satisfactory for this purpose) and noting any odor which the filter paper may have after the evaporation. The higher al-

The above series of tests by the procedures as outlined are now applied as a matter of routine to all lots of ether purchased for anesthetic purposes. The current hospital practice is to buy anesthetic ether in lots of 100 pounds or more. On receipt of the shipment, one or two pounds are taken from the shipment and sent to the laboratory for examination. The report on the analysis goes to the superintendent and to the pharmacy. If favorable, the ether is issued for the designated purposes; if unfavorable, it is returned to the manufacturer with a statement of the reasons for rejection.

First, twelve out of twenty-five samples, practically 50 per cent, were rejected and nine of these showed marked peroxide content.

An analysis of the above results is not without interest. It will be noted that the four samples, Nos. 4, 5, 9 and 11, with a specific gravity of .715, were all rejected, they showing other sources of contamination. The two ethers showing the lowest specific gravity, Nos. 6 and 25, conform satisfactorily to the accepted standards, as was stated in the earlier part of the discussion. The others with a specific gravity of .714, Nos. 8, 12, 13, 19, 22, 23 and 24, a value corresponding, as has already been stated,

to 0.721 at 15°/4°, were all accepted but one exception, namely, No. 22.

With the intermediate values, there seems to be no particular rule for acception or rejection which is indicated by the specific gravities. It may be said generally, however, that by the method adopted, specific gravities between .711 and .714 fall within allowable limits. Values above the latter number should excite suspicion of the purity of the product. Under the distillation test, it will be observed that a relatively large number of the samples fall materially under the criterion established by Baskerville and Hamor. Over 50 per cent of the ethers show less than 90 per cent distilling under 36°, and in many instances only 50 per cent of the sample had passed over at this high temperature. It is to be remembered, however, that no great degree of accuracy is claimed for these results. An attempt to correlate specific gravity with percentage distilled fails signally, for while the four samples of highest specific gravity are all under 90 per cent, of the remaining ten the actual percentages coming over bear no relationship to the specific gravities. While this test if carried out accurately would undoubtedly be more informative than is the case with the present rough method, it remains questionable, as has already been stated, if its inclusion is sufficiently valuable to warrant the time expended.

The aldehyde test leaves some room for discussion. In a few of the samples, Nos. 9, 11, 15 and 18, there was a definite separation of material as well as a marked turbidity of the ether. Several of the other ethers, Nos. 5, 10 and 20, showed a turbidity on standing but without the formation of a separate. Baskerville and Hamor have already noted the fact that peroxide alone may cause a turbidity, so that too much weight must not be given to this test unless there is discoloration of the ether or a separation of resinous bodies. They further note that contact with cork may lead to a yellow coloration on applying the test which is not a true index of aldehyde content. In but one instance, No. 25, was this condition met with, all other samples being drawn from original metal containers.

The peroxide test is perhaps the most satisfactory of the exclusion tests for routine laboratory procedure. Its ease of performance, lack of technical difficulties, sensitivity and accuracy render it a most satisfactory test. None of the samples examined showed acid in appreciable amounts, and in only one (No. 20) was the odor test positive. An inspection of the joint results of the aldehyde and peroxide tests discloses the following fact: In but two cases is the aldehyde positive and the peroxide negative (Nos. 9 and 11), while in a number of samples negative aldehyde tests are observed with markedly positive peroxide. This introduces a consideration of the probable mechanics of contamination.

It is fair to assume that with all of the firms manufacturing anesthetic ether, every effort is made to produce an article of high grade and conforming straitly to the criteria established by the pharmacopoeia, by purchasing boards and other standardizing agencies. The usual method of vending ether by sealing it in small metal containers brings about a condition promoting contamination after the ether is ready for market. The prime essential for the contamination produced by oxidative processes is the presence of oxygen. These containers, which are only partly filled, show a relatively large air space, and this is proportionately greater to the volume of ether, the smaller the unit in which the ether is sold. As the tendency in vending anesthetic ether is to use small units, owing to contamination after the can has been opened, this method of distribution imposes the conditions most conducive to consequent contamination.

A further factor, and one which the writer believes has not been generally recognized, is the catalytic action of the metal of the container. Contact action is undoubtedly a factor, and among the efficient catalyzers of reactions of these types, the metals play a most important rôle. Possible methods of obviation would be the use of a glass container, which involves certain difficulties in transportation and in the mechanical detail of handling, or the filling of the metal containers completely at the boiling point of ether, closing them by means of an electric soldering iron and low melting alloy and constructing the cans sufficiently strong so that there would be no tendency to collapse from the resultant partial vacuum which would exist when the ether had cooled down to room temperature.

An interesting confirmation of the catalytic action of the metal container is found in the analysis of sample No. 25.* This is a sample of Khalbaum's "Aether fuer Narkose" which bears the factory date of February 7, 1910. The ether is contained in small 100 cc. bottles of amber glass sealed with cork stoppers which, in turn, are covered with the standard Kahlbaum foil cap. The bottles are wrapped in an excellent grade of paper which, however, allows the passage of considerable light. Each bottle bears the warning "To protect from light." This sample, over eleven years old, shows a specific gravity of 0.711, the initial boiling point is 33.6°, which would bespeak a slight water contamination, 95 per cent of the total amount distilled over under 36° and the remaining tests were all negative. The potassium hydroxide test for aldehyde showed a slight yellow color but, as has already been stated, the contact of ether with cork gives rise to such a discoloration. The other aldehyde tests given by Baskerville and Hamor, notably the Nessler test, were all negative, confirming the conclusion of the absence of aldehydes.

In the writer's opinion, those ethers which show aldehyde and no peroxide are to be regarded as having been packed in an impure state. That small amounts of aldehyde will be formed during the process of ether manufacture is too well known to require discussion. Unless this aldehyde be removed entirely, it will be carried over and appear in the freshly prepared ether. In ethers showing peroxide alone, the warrantable inference is that the contamination has occurred after the liquid was sealed in the container. Where both peroxide and aldehyde are present, the latter may represent initial contamination but more probably is the second phase of the slow oxidation of the contents of the can. Studies are under way at the present time to determine the effect of storage on aldehyde and peroxide formations, the influence on the same of various types of container and the physiological action of aldehyde and peroxide when present in known amounts in narcotic ethers. With the incomplete data available, no limit can safely be set to the time of storage. It is recommended, however, that ethers be dated and lots over three months old returned to the factory for examination. Experience may show that this time can, with safety, be materially extended.

This preliminary communication is made in the hope that it may assist other institutions in standardizing their supplies of anesthetic ether and indirectly assist the manufacturers in the maintenance of standard for their products.

*The writer is indebted to Dr. Frank L. Richardson of the Boston City Hospital for this sample and takes pleasure in acknowledging the courtesy at this time.

The author wishes to express his thanks to Marion D. Alcott, by whom most of the analyses given above were made.

PROPOSED NURSES' HOME FOR WESLEY MEMORIAL HOSPITAL, CHICAGO

By E. S. GILMORE, Superintendent, Wesley Memorial Hospital, Chicago

IN PLANNING a new nurses' home the trustees of Wesley Memorial Hospital have considered the needs and desires of the nurses. It is the belief of the hospital management that the care given by the hospital to its nurses is invariably reflected in the care given by nurses to patients. If the patients are to receive the kind of care they are entitled to and which the hospital desires to give them, the nurses must be properly housed and made to feel that their interests are always considered and provided for as far as possible by the hospital.

A spirit of loyalty to the hospital cannot be engendered or maintained in the nurse unless the hospital is loyal to her best interests. This means reasonable hours of duty for the nurse, ample time for recreation and study, skillful and generous care in case of sickness, proper vacation periods, and a thorough, systematic and complete course in nursing. It requires also that hospital and training school authorities recognize that a person old enough to be a nurse is old enough to be treated as a woman, not as a child, and is entitled to have her wishes given thoughtful and sympathetic consideration.

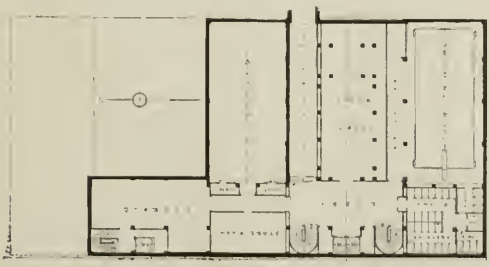
It is with these thoughts in mind that the Wesley Memorial trustees have chosen for the site of the nurses' home the property immediately across from the hospital. The two buildings will be connected by a subway so that the nurses may go to and from the home without going outdoors. The home will be a combined home, club and school. The building will be U-shaped, with enclosed court two stories high as a lobby and mezzanine. Entering from the street level the nurse will pass between parlors into a beautiful lobby, where she may receive her friends or chat with other nurses. Should she desire privacy, to which every young woman is entitled when entertaining her company of either sex, she may ascend the stairway to the mezzanine floor which will have ample accommodations for a dozen nurses to entertain their friends at one time. To the left of the lobby as you enter, occupying the basement and first story, will be a swimming pool, thirty feet by sixty feet. To the right as you enter, occupying the basement and first story, will be a gymnasium. At the rear of the lobby will be the elevators, running from the basement to the roof. In the second story over the swimming pool will be classrooms, consisting of a recitation room, a classroom for dietetics, a chemical laboratory and a library.

Over the gymnasium, on the second floor, will be a dining room, large enough to seat 200, at tables for two, four, and six. At the rear of the dining room, to one side, in an L, will be located the kitchens, store rooms, etc. There will be provision made for a wash room, where nurses may launder such lingerie as they do not wish to send to the laundry, and a sewing room for its repair.

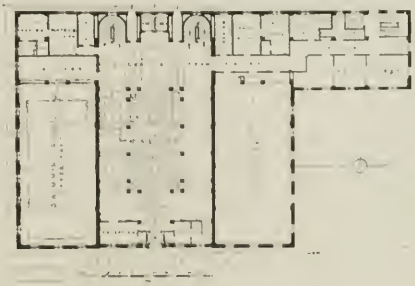
Nurses to Have Individual Rooms

Each nurse will have her own room; between each two rooms for nurses will be a bathroom. Each nurse will also have a closet large enough to contain her trunk and such clothing as would naturally hang in the closet. Head nurses will each have an individual room, closet and private bath. Assistant superintendents of nurses will have a living room, bedroom, closet and private bath. The

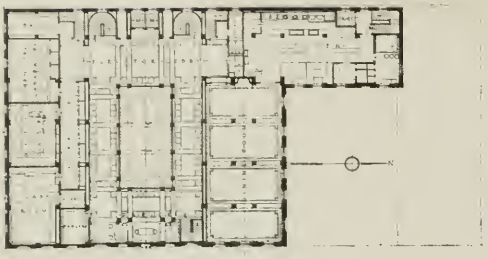
Proposed Nurses' Home for Wesley Memorial Hospital.



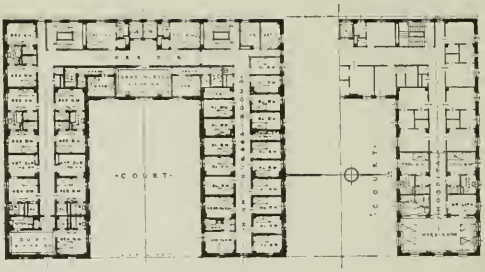
Basement floor plan.



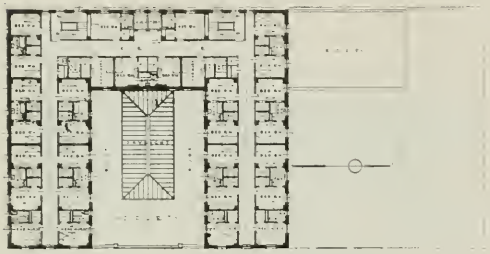
First floor plan.



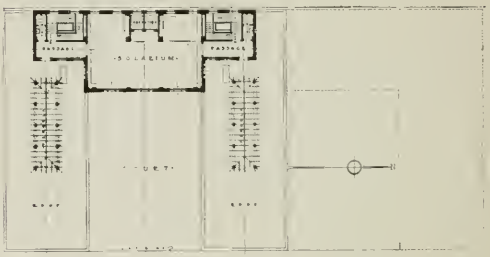
Mezzanine floor plan.



Eighth floor plan and north half seventh floor plan.



Second to sixth floors.



Ninth floor plan.

superintendent of nurses will have a living room, bedroom, closet, kitchenette and bath. Student nurses while on night duty will retain their own rooms and in addition will have small private rooms in which to sleep. These rooms for the night nurses will be isolated from the rest of the home so that their sleep will not be disturbed by the activities of others. There will be hospital quarters for sick nurses, consisting of a small ward for four, with utility room, bathroom, etc., and two private rooms, each with a bath, for nurses whose sickness requires such seclusion.

Graduate nurses who may be on special duty in the house and who do not care to go out during their hours off will have a lounging room. At their disposal also will be two private rooms with bath, should they wish to sleep during their hours off duty. Sufficient locker space to contain their grips and street clothing will be provided for graduates.

Roof Garden and Solarium Are Features

The home will have an enclosed roof garden, fitted up as a lounging room for nurses in negligee, and two open roof gardens, with pergola, where during warm weather they may secure the benefits of the breezes.

The building is to be of reinforced concrete with pressed brick facing, eight stories high with an English basement and the roof garden in addition.

The nurses' home will have its own chef and other kitchen employes and waitresses, so that the nurses may be supplied with the food best fitted for them and most to their liking. A physical directress will be placed in charge of the gymnasium and swimming pool.

It is the belief of the trustees and management of the hospital and training school that this building will give the nurses every opportunity for rest, relaxation, comfort and development. It is the management's belief that the nurses are entitled to all these things.

Gold that buys health can never be ill spent.—John Webster.

ROUTINES OF MATERNITY CENTER

Routines evolved by the staff of the Maternity Center Association at 370 Seventh Avenue, New York, have been published in pamphlet form. The pamphlet contains rules for the conduct of the clinic, the doctor's duties, standard clinic equipment, routine for prenatal visits and a supplement of advice to mothers. The details of the routines were decided by staff vote of the Maternity Center Association after discussion of methods that would meet the requirements outlined by the medical board and nursing committee of the organization. Instructions to staff members are that if any member in trying to follow the routines thinks of an improvement, her suggestion will be taken up in staff conference and the majority vote will decide its adoption.

SOME POMES

Written by a sick man in Burlington, Vt.

TO MY WIFE

This hospital life is certainly hell.
I don't like the girls and I don't like the smell.
And I think as I lie on this damnable bed,
And I ache from my feet to the top of my head,
If I ever get back to my own little home,
Where I don't have to hear them all holler and groan,
I'll settle right down for the rest of my life,
And stay in ev'ry ev'ning with the kids and my wife.

TO MY FRIEND

This hospital life is certainly fine,
The nurses are great and their faces all shine.
There's one looks to me like a million or more,
And I try to buck up, by my "tummy's" so sore.
I lie here and rest on the nice downy bed,
And I feel the sweet warmth of her hand on my head.
And I think that I soon will be back to the life,
And be bossed as before by the kids and my wife.

—*A. M. A. Journal.*

NURSING AND THE HOSPITAL

Conducted by CAROLYN E. GRAY, R.N.,
Department of Nursing Education, College for Women,
Western Reserve University, Cleveland, Ohio

PUBLIC HEALTH AND PUBLIC LIBRARIES

BY FLORENCE BRADLEY, EXTENSION LIBRARIAN, HEALTH LIBRARY OF COMMON SERVICE COMMITTEE, NEW YORK

IF THERE are two professions the development and expression of which could be claimed as typically modern, democratic and American, they would be public health and public library work. Dealing as they do with the same groups of people, receiving their support from like sources, they should contribute to the general public welfare by consciously supplementing each other's activities. But this they do not always do. It is strange that there should be any need for reconciling public health with public library work, yet it is true that up to the present certain barriers and restrictions have existed between them.

There are two reasons why the library profession must become interested in public health: first, because the health world has developed so many special libraries that it has contributed somewhat largely to this particular development of library work, and secondly, because the library profession is fundamentally interested in all matters that concern the development of literature. The library world can no longer be unconscious of the fact that a new form of literature is beginning to present itself and that new educational forces are setting to work, all the more important because based upon a scientific knowledge and technical form of education. The question is, what relation does this bear to public libraries in general? Are the present barriers and restrictions between public health and public libraries to remain or can they be cleared away? Do public health workers need the help and support of the entire library profession or simply of a part of it?

Pink Sheets First Health Literature

Before answering this immediate question it might be well to consider what is meant by health literature. So far as libraries and librarians are concerned, health literature meant in the beginning thousands of pink and yellow sheets with large printed warnings against plague and pestilence. But we now know that health literature means something quite different from this earlier conception. Based entirely upon medical literature, we may recognize this off-shoot as playing a quite important part. In spite of its having been called both "propaganda" and "popular literature," it seems to have come to stay and refuses to be detached from home and community life. When the property owner wants books on sanitation, the club woman asks for references on child welfare, the public health nurse seeks material on the social aspects of her work, and the teacher searches persistently for health "stories," why not recognize them all as expressing a need for the same thing—good, authoritative health literature. To be specific, we mean books dealing with social hygiene, mental hygiene, health administration, community sanitation, child welfare, public health nursing, tuberculosis, etc.

Until recently requests for books like these came only from the specialist. They did not find their way into the reference rooms of public libraries, but remained within the province of the special library. Now that they have literally broken loose upon the community, the point of meeting them adequately must be considered. To do this, shall we cling to the special library, finding it where and when we may, or shall we summon to our rescue the public library? Is it possible for public health and public library to meet upon the common ground of community education?

To recognize that this can and has been done, it is only necessary to look about and observe other specialists within our communities who draw upon public libraries for their book support. Perhaps it was the teachers who first approached public libraries for group support, that is, the allowance of a fair share of the library's budget for such technical literature as pedagogy, nature study and child training. Such requests were not only granted by all public libraries but looked upon as legitimate library business. No sooner was this an accomplished fact than there appeared a new community worker. She was called a "social worker" and came from a settlement house, asking for much stranger books than teaching—books on social work, books on the community, books for meetings, reference collections within the library and special deposits outside the library. The social worker asked a great deal of libraries, but in return gave much, for it was she who began to urge librarians outside their walls and introduce them to their communities. This was most fortunate because of the next representative, the all demanding Americanization worker, a combination of teacher and social worker who needed not only a special selection of books, but in quantities that were staggering, such as primers and duplicates of primers for those underfed and malnourished minds of the communities so recently discovered by the social worker.

Amateur Library Service Threatens

Who shall be next is not for the librarian to say, but it would seem logical for the public health worker to declare himself (and herself) as soon as convinced of the

trustworthiness of libraries and librarians. In the meantime, there is but one course of action for all: to depend upon the special library. For in every way that the special library is serving its experts, just so much is it guarding the public library—warding off the specialist and protecting book appropriations from the heavy inroads of scientific literature. Especially has this been true in regard to medical literature. So long as the circulation of health literature is confined to the special library by doctor, health officer, training school director, and public health nurse, so long will public libraries evade the issue.

While we are deciding what is eventually to be done, there is a danger to keep in mind that would naturally be apparent to the librarian. It is the inclination to expand book collections or private health libraries into so called library services. For obvious and various reasons, health department budgets will seldom provide the salary of a librarian, yet the amateur library service will be established in proportion to the spread of public health work. Already we hear of new library schemes for health workers. In monthly health bulletins, we discover "library reports" and "library statistics." On investigation the source of these reports is sometimes a room with a

A corner of the Health Library of The Common Service Committee, 370 Seventh Avenue, New York.

glass door bearing the word, Library. Inside the custodian is perhaps scrubbing the floor. Instantly there returns to mind visions of the pink and yellow sheets—health literature, such as, "Do not cough!" "If you sneeze!" But on the contrary, what is labeled "library" is indeed "library" for its shelves are well filled with books, pamphlets, clippings, historical material, new reports. Such material is worth reporting in health bulletins but only if under the expert care of the classifier and cataloger who will in turn attend to proper methods of circulation so that health officer, public health nurse and all other community workers shall have access to these valuable guides and aids.

It is the economic side of all this that really appeals to the librarian. She cannot but question the spending of both time and money on the establishment of libraries outside of libraries. She would concentrate libraries within libraries. Why does a state board of health develop its own package library instead of supporting the extension service of its state library? Why do rural nurses spend even the smallest part of their salaries on books to circulate among county families instead of helping to build up their travelling libraries? Why do hospitals arrange book deposits for their patients, but not for staff or training schools? All these are the legitimate forms of state and public library work that would serve health workers fully and constantly, if the workers could in turn spend only a little time explaining and interpreting the aim and purpose of their undertakings.

It is more than a simple coincidence that while a state health department often presents an honest claim that there is not a single book in the travelling library department for either health officer or public health nurse, the state librarian can equally well answer that she buys not a book on community sanitation or school nursing because she knows it will stand on the shelf unused from year's end to year's end. Such a condition of affairs must be only because of lack of understanding between these two professions the members of which have been so busy following the fast and furious development of each day's work that they have not had time to see how closely their interests could be interwoven.

A glance into national library organization shows that the administrative machinery is not unlike other national bodies. There is an American Library Association, state libraries, commissions and associations, with committees on institutional work, extension and travelling libraries based on county plans, town libraries and city libraries with systems divided into departments and divisions just as are departments of health. It is a perfectly logical scheme that has been moulded by public needs and developments, permanent but elastic, adapted to any change and reorganization that may be indicated by future needs. Will none of this fit the needs of community health?

* * * * *

These are the main phases of the whole question as revealed to the Health Library of the Common Service Committee in its work with field health workers and public libraries. The Health Library is essentially a special library, but being a national one it maintains a unique position. It stands so to speak on the border line between the professional and non-professional world and because of this has some opportunity to help interpret the one to the other. Within the Health Library there are two services that work very closely with each other—the reference department and the extension service. When requests come to the reference department indicating new undertakings of field workers, they are in turn referred to the extension service for suggestions as to forms of book and library support, based as fully as possible upon local facilities. By this constant interplay between national and local library, special and public library, it will be possible to continue to suggest various forms of cooperative effort between librarian and public health worker, but after all is said and done it is largely a matter of local supply and demand, demand and supply, between professions. Or, shall we put it in terms of the "community minded" and say coordination of state and local activities? What the Health Library may do is no more than the mere pointing out of ways and means of applying the technical and material support of the library profession to the needs of the medical and nursing profession in their community work.

That libraries and librarians have been overdiscriminating in the past as to health literature may possibly be granted, but because of this very hesitation and delay have not the makers of health literature had time to formulate standards of work that will produce a sturdier and more genuine form of literature, one that will not need any championing? From our traditions, comes our literature.

HERE WE ARE!

By LINDA A. EASTMAN, Librarian, Cleveland Public Library, Cleveland

WHAT would be the present state of progress of the world, had printing never been invented? Certainly centuries behind what it is today. Modern life without books is inconceivable, but books, through their very multiplicity and diversity, have brought the need for specialized service to make them useful.

So here we are, librarians, the organizers and dispensers of books and other printed matter, and here is the public library, whose mission it is to make books available when and as they are needed.

That the Public Library can function as an important aid to the cause of nursing education, to nurses themselves and to our hospitals in various ways is becoming more and more obvious to nurses and to librarians alike. This mutual recognition of the desirability and the possibilities of such aid is the first step toward practical cooperation.

A few of the opportunities which the Cleveland Public Library has found for service along these lines may be suggestive of still further helpfulness.

Of primary importance to the nurses' training schools is the ever present question of recruiting. The Cleveland library is compiling a list of the best suggestive material to be used in connection with the talks on nursing given in the vocational courses in the high schools and for individual inquirers who may come to the library.

Few nurses' training schools have anything approaching an adequate school library. This deficiency can be met only in part by the public library, but the schools which are endeavoring to use its resources are finding valuable supplements to their own rather meager supply of professional literature and a rich mine of material in the broad general fields of public health and social service. The Cleveland library is loaning this material not only to instructors and student nurses on individual request, but through its stations' department it is sending books out to several of the hospitals and to the Nursing Center for the classes there. As the instructors learn to send in their orders long enough in advance it will become possible for the library to meet more of their demands by the purchase of books not already in the collection. Many specialized books on nursing subjects it will probably never get, these being within the more definite province of the school library, but much that is wanted can properly come within the scope of the public library collection.

Cleveland Library Aids Student Nurses

Perhaps of even greater importance than the furnishing of books in connection with the study courses is the stimulation to recreational and cultural reading which most of the student nurses need. There should be, of course, a carefully selected, well-stocked library of recreational books for both nurses and patients in every hospital, but until there is the public library can do something to supply this lack to the student nurse. The Cleveland Public Library is sending to each class an invitation to use the main library or the nearest branch library, and with the invitation go application blanks which can be filled out in advance to serve as a reminder and to simplify the process of procuring a card. The library bulletin, the *Open Shelf*, containing annotations on the new books, is being sent to each of the classes for distribution to the students, and from time to time such book lists as may arouse interest in various books or subjects. A list of cheerful books for reading aloud to patients is one of the lists available. *Talks on books and on the pleasures of reading have been given by members of the library staff to one or two of the schools, and more frequently to groups of students and nurses at the Nursing Center, where it is hoped eventually there may be a regular public library station.* Some of these talks at the Nursing Center have attracted audiences of 200 or more and have aroused considerable enthusiasm. Just the other evening, at one of our largest hospitals, some fifty student nurses enjoyed to the full a lively discussion of some of the notable books of the year, and commented afterward on the refreshment of mental outlook it brought them after a particularly strenuous day.

"It is the glory of great poetry or great fiction that these forms of literature develop within us our sympathetic understanding of moods and lives that perhaps are not our own. By grace of the poet and the story-teller we may live a thousand lives in our three score years and ten. Without them we should be condemned to live solely in the little cabin of our own experience, and be in no better case than the rustic who has never travelled further than fifteen miles. For the highest imaginative literature 'deals with facts' that are of much greater significance even than the fluctuations of the money market or the results of a political election. It deals with the facts of the soul, the emotional experiences of men. A great imaginative writer expresses the profoundest or the subtlest of such experiences," wrote Clifford Bax in his little book on *Friendship*.

Hospital Should Have Trained Librarian

Nurses, like teachers and librarians, need to know how to use books as tools in their work; not only should they learn to read for the invigoration of their own mind and spirit, but also to pass on their treasure-trove to those who came, sick of body or of mind, under their care. Physicians are more generally recognizing the very real therapeutic value of properly selected reading in the treatment of many cases, and frequently to the nurse falls the choice of the patient's books. John Kendrick Bangs, that genial humorist whose own writings have brightened many a sick-room, and whose pen has just been laid down forever, wrote a serious article for the *Bookman* about a year ago, in which he said: "If I were a doctor I should make books a part of the materia medica, and prescribe them for my patients, according to their need. Over the door of the library at Thebes were inscribed the words, 'Medicine for the Soul,' and Diodorus described books as 'the medicine of the mind.' I can personally testify out of a rich experience to the medicinal value of books. Many a time have I wakened in the deadly darkness of the night, gasping for breath, with an acute indigestion, and, feeling myself on the verge of dissolution, lit my lamp. And in the breathlessness of some great book, such for instance as Victor Hugo's indictment of "*Napoleon the Little*," I have as by some homeopathic magic found almost immediate cure of my own. A course of Mark Twain and Bernard Shaw is good for any man's liver; and I cannot even estimate the number of occasions when, afflicted by insomnia, I have wrestled sleep from the pages of books which I shall not name, as freighted with the anodyne of slumber as any poppy-field from Hindustan to Ponkapog. Literature contains the herbage of thought

that cures. Whether used as anesthetic to soothe a distraught nerve, or as tonic to stir to action a sluggish circulation, books serve the purpose."

Dr. Cary T. Grayson, in an interesting article on *Books as a Mental Diversion* in the same magazine, emphasizes the great importance of choice of reading for certain types of patients.

The time should come when every hospital will have not only a carefully selected and well-stocked library for nurses, interns and patients, but a librarian trained as a specialist in books for hospital use; this librarian should have a recognized place on the faculty of the nurses' training school, just as the librarian-teacher is already coming to have on the faculty of the normal school and the high school. Toward this end the public library can do something to point the way; when the end is attained, there will probably be still more ways in which the public library can be of service because the trained hospital librarian will in turn see more opportunities for utilizing its resources.

In the meantime the partial service which the public library can render is so superior to no service, that those schools which are taking full advantage of it are wondering how they ever got on without it. Here we are, the librarians and the public libraries, free for all—use us!

DINNER HONORS MISS MAXWELL

IN THE spring of 1921, at the time of Miss Anna M. Maxwell's retirement as director of the school of nursing of the Presbyterian hospital, New York, it was suggested that a dinner be offered her in recognition of her services to the community. Miss Maxwell regretted that the pressure of work incident to her retirement precluded her acceptance of the honor. Upon her return from a long holiday in Europe, her consent was again sought and was finally won on the plea that an opportunity would thus be given not only to recognize her achievements, but to say "Welcome Home."

The executive committee on arrangements for the dinner consisted of Miss Mary Parsons, chairman, Miss Mary Magoun Brown, Mr. Thatcher Brown, Miss Anne E. Goodrich, Miss Jessie M. Murdoch, Miss Adelaide Nutting, Miss E. E. Pearce, Miss Blanche Potter, Mrs. John I. Pratt, Mrs. Whitelaw Reid and Miss Lillian D. Wald.

A large committee of 150 was formed representing the great variety of community interests in which Miss Maxwell has taken a definite part. Thus there came together at the Biltmore Hotel, on the evening of February 1, 800 of her fellow workers and friends of the professional and social world. A reception preceded the dinner after which Dr. John H. Finley, chairman, with the guest of honor, led the way to the banquet hall.

Dr. Finley developed an interesting program with not only a fine conception of its significance, but with that light touch of humor which distinguishes his rare gifts. Early in the program, a greeting from Miss Louisa Lee Schuyler, the honorary chairman, was read by Dr. Finley, who designated Miss Maxwell as "that wonderful woman to whose initiative is due the first conception of a school of nursing in this country." Her message follows:

"I wish to add my word of affection and esteem to the many tributes which will be showered upon you by your friends assembled this evening to do you honor.

"You are the dean in this city of your noble profession of nursing; and the school of nursing of the Presbyterian hospital owes the high standard it has reached and maintains today to you, as its director for thirty years, to your power of organization, your executive ability, your genius in the art of teaching, and your strict discipline, so tempered by justice and kind-heartedness, that each pupil has accepted it as suited to her own individual need.

"God bless you, and keep you with us in health and happiness for many years to come!

Louisa Lee Schuyler."

Miss Adelaide Nutting gave a brief, masterly survey of the development of nursing in America, portraying with what vision, as a pioneer, with what wisdom and enthusiasm, through long years of heroic effort, Miss Maxwell had made her contribution towards perfecting a system of technique and standard of ethics upon which alone the usefulness and strength of the nursing profession can be maintained and developed.

British Nurse Cables Appreciation

A cable was read from Mrs. Bedford-Fenwick, President of the National Council of Nurses of Great Britain, as follows: "National Council of Nurses Great Britain, offers Miss Maxwell warm appreciation of splendid life's work for nursing and humanity." This message was followed by one from Dr. Hamilton of the Protestant Hospital in Bordeaux—"Hail Miss Maxwell! Fairy Godmother of the Bordeaux School."

The next speaker, Dr. George E. Brewer, carried one swiftly from a consideration of ideals to their practical exposition. As consulting surgeon of the First Corps of the American Expeditionary Forces, Dr. Brewer was director of the British Base Hospital No. 2 to which the Presbyterian Hospital Unit was assigned during the war. His thrilling testimonial of the courage and efficient service of this unit during times of danger emphasized his belief that this was due not only to the character of the individuals, but to the spirit of the school of nursing of which they were examples.

The American Red Cross was represented by Mrs. August Belmont who paid a generous tribute to the nursing service as an integral part of that organization. Mrs. Belmont traced Miss Maxwell's energetic cooperation at the time of the organization of the Red Cross and recognized her signal services during the period of the war. After recounting a charming story of an old servant who wanted her sick mistress to have her roses "when she could smell 'em," Mrs. Belmont added "and *you,* Miss Maxwell, should have *your roses* when you can *smell* them!"

Dr. Haven Emerson devoted a few moments to the subject of the development of the nurse herself as the link between the doctor and the patient. Dr. Emerson indicated that, in his opinion, the success of public health work depends in the last analysis, upon the intelligent enthusiasm and cooperation of the nurse.

To Miss Lillian Wald fell the pleasant task of describing the development of that branch of the nursing profession which finds a noble expression in the settlement work of Henry Street. An account was given of the difficulties of the early days when the present scope of the work was only dreamed of and when Miss Maxwell stood behind the project as one of its staunch supporters.

The program was interspersed with the reading of telegrams of congratulation and good wishes from a num-

ber of organizations among which may be mentioned the National League of Nursing Education, The State League of Nursing Education, the American Nurses Association, the board of trustees of the Presbyterian Hospital, and the Army Nurse Corps. Messages came also from many friends of the medical profession among which may be quoted that from the dean of the Medical School of Columbia University. "I regret exceedingly my inability to personally express my sincere appreciation of all that Miss Maxwell has contributed to nursing and to medicine. Her example and influence will be a permanent memorial. May she live many happy and useful years!—William Darrach." And also the following from the dean of the medical profession: "Many thanks for invitation. Regret extremely that I cannot accept. Miss Maxwell's services merit every tribute of respect, admiration and gratitude which can be paid her. Please give her my cordial regards, felicitations and best wishes. William H. Welch."

Greetings were brought Miss Maxwell from Miss Hilliard, representing the Alumnae Association of St. Luke's Hospital; from Miss Riddle of the Alumnae Association of Boston City Hospital; and from Miss Cadmus of the Alumnae Association of the Presbyterian Hospital.

The closing address was made by Miss Anne E. Goodrich. For the moment the record of achievement was forgotten in the vivid portrayal of Miss Maxwell as a friend. The quick sympathy, the unfailing interest in human effort, the love of the world—books, music, travel—and above all, that "sporting spirit" were drawn with skillful hand, leaving to memory a radiant tribute lavishly paid to a living friend.

In response, Miss Maxwell conveyed her deep appreciation of all that had been said by her friends but acknowledged herself as only an instrument by which the work had been accomplished. Miss Maxwell attributed whatever success had been attained to the faithful cooperation of the board of managers of the hospital and to the spirit of youth which came into the school of nursing with each new class. Thus sharing the honors with those who shared the labors, Miss Maxwell said "Adieu."

MISS E. E. PEARCE.

"But it is far more difficult to get people to avoid poisoned air (than poisoned water) for they drink it in by the gallon all night in their bedrooms and too often in the day."—Florence Nightingale.

THE "THRILL" IN NURSING*

"Mrs. John A. Sinclair, one time Aileen Cleveland Higgins, has written in her textbook, 'The Psychology of Nursing,' these lines, which I trust will sound familiar to members of the senior and graduating classes of our training school:

"'To nurse a human being back to his place in life has an unending thrill to it. Sometimes a sickness may readjust the patient's idea of living. He may get something spiritual out of his sick-room experience.'

"I think we will agree with Mrs. Sinclair that to 'salvage what is left of a human being is one of the greatest triumphs a nurse can achieve.' Perhaps it is one of the greatest triumphs anyone can achieve.

"Mark Sabre is a pathetic hero of a popular story, 'If Winter Comes.' Mark Sabre was wont to say: 'I can see that he is right,—from his way of looking at it.' The way of looking at things does make a great difference. If we recognize routine duties which are a part of training as a means to an end, there will be nothing menial or disagreeable in the long months of training. We may glory that we have a part in bringing someone back to his place in life, if we can 'feel the thrill of it.'

"It is my hope for each one of this class that she may think of her work in such a way that the thrills will come.

"I would have the thought that includes this hope my contribution to the memories of this evening."

*The brief address to the graduating class of City Hospital Training School, Worcester, Mass., delivered on December 16, 1921, by Dr. C. A. Drew, superintendent.

SIXTY-SIX ENROLL IN PENNSYLVANIA PRELIMINARY NURSING SCHOOL

The experimental semester of the School for the Teaching of Preliminary Courses in Nursing Education was begun February 2, at University of Pennsylvania, Philadelphia, with an enrollment of sixty-six students from the training schools of eleven hospitals.

Miss Sara Murray, R. N., educational director of training schools for nurses in Pennsylvania and chairman of the joint committee, presided.

The students were addressed by Dr. Simon Tannenbaum, president of the Philadelphia Hospital Superintendents' Association; Miss Alice Garrett, R. N., president of the Philadelphia League of Nursing Education; Miss Roberta M. West, secretary-treasurer of the Pennsylvania State Board of Examiners for Registration of Nurses; Miss Margaret Dunloy, president of the Graduate Nurses' Association of Pennsylvania, and Miss Anna Garrett, president of District No. 1, Graduate Nurses' Association of Pennsylvania.

Instruction is being given at the Drexel Institute on Mondays and Tuesdays in nutrition, cookery and applied chemistry by the regular instructors of the Institute. On Wednesday, Thursday and Friday, volunteer nurse instructors, most of whom are loaned by hospitals, are teaching anatomy and physiology, elements of psychology, personal hygiene, and hospital housekeeping; these subjects to be followed by elementary bacteriology, drugs and solutions, bandaging, and history of nursing, including ethical and social principles.

This school is being supervised by a joint committee composed of representatives appointed by the Philadelphia Hospital Superintendents' Association, the Philadelphia League of Nursing Education, the Instructors' Section of the League, and the Pennsylvania State Board of Examiners for Registration of Nurses.

TO SURVEY CANADA NURSING FIELD

Dr. M. T. MacEachern, superintendent of the Vancouver General Hospital, has been made director general of the Victorian Order of Nurses for Canada and upon invitation of the board of governors will make a survey of the need for nursing service in Canada, how far that need is being met by any existing agency and what further part the order should take to meet the need.

DIETETICS AND INSTITUTIONAL FOOD SERVICE

Conducted by LULU G. GRAVES,
Supervising Dietitian, Mt. Sinai Hospital, New York.

HUMANIZING THE HOSPITAL KITCHEN*

BY MARGARET PROCTOR, ECONOMIC SECRETARY, NATIONAL BOARD OF THE Y. W. C. A., WASHINGTON, D. C.

THE subject of this paper was to be "Placing Equipment." This is somewhat of a hobby of mine, and I don't usually refer to it under that name. I would very much rather call it, and I very much prefer you to speak of it as, "humanizing the kitchen."

Appreciation is one of the main things in our attitude of mind towards humanizing the kitchen. We are given a new problem to attack. The first thing is to sort out the kinds of things that are correlated, one to another.

At the entrance of your building, the door of which must be on the street level convenient for all types of vehicle delivery, we have arranged all kinds of scales and weights, checking systems, tally cards, time cards, etc. Everything is received here, whether it be a bag of rice or an employe. He or it is checked up. Control of that department is held by one person for a limited period, probably eight hours.

Great storerooms can be arranged near the entrance for different types of food stuffs and other supplies in reach of the elevator. On the other side of the entrance is a reception hall, lockers, toilets and showers for employes. We think that an employe is entitled to be kept decently and I know from having worked around in hospitals and institutions of different kinds that at the end of a hard day in a kitchen a person is pretty hot, tired and disgusted. If she can have a shower she goes home feeling respectable. That moral tone we make an effort to keep in our employes. The women's locker rooms are provided with a rest room in which are sanitary couches with washable covers that can be changed as often as necessary. That we find holds employes a great deal better than many other concessions we might make them.

Adjoining the service rooms for employes and food stuffs, we have the garbage disposal rooms, which in our new buildings are being supplied with freezing apparatus. All of the garbage that goes out of our new buildings is frozen. The garbage is kept at a point very much below twenty degrees, and there is no odor. It is not an objectionable back door in any sense of the word. People are living there, holding their jobs there for a given number of hours a day, and it must not be objectionable.

When we reach the kitchen proper we think again about correlating the living conditions of all the people who work in the kitchen; to this end the employes' dining rooms are placed as near the kitchen as possible. In many institutions we have the employes under the kitchen and the food, by elevator, is sent down to their steam tables. We always try to put the employes' dining rooms in a corner of the building so they can have, during their leisure hours, outside air to breathe. We try to arrange separate dining rooms for men and women. If the employes are colored and white, as is often the case, we have the dining rooms divided. People prefer to eat their own kind of food with their own kind of people in their own way. This preference can be met by a judicious arrangement of the dining room spaces.

The kitchen is the heart of the institution and it ought to be housed in as much sunlight as possible. Think of the electric bills that can be saved with kitchens on the roof rather than in the basement. The work accomplished in a kitchen or bake shop is a fine highly trained art, and it is so much more worth while if it is done under pleasant surroundings and in sanitary and hygienic surroundings. This cannot be accomplished underground.

Easier to Tear up Paper than Bricks

When planning a building you can well spend a lot of time in study. I draw and redraw, plan and replan dozens of times until finally I know that every single chair is going to have elbow room all the way around it, that the chef in moving between his range and cook table is not traversing a general runway and that the baker is not going to cross the chef (they will cross each other mentally, of course) during the process of a meal.

When you are making plans for a building, therefore, remember that it is a great deal easier to tear up paper than it is to move bricks. If you could see the buildings I am asked to inspect you would be thunderstruck at the lack of vision the builder had in developing a thing that is a positive fake, that doesn't function.

Keep down your overhead by using your head. Place all your equipment so that your worker can see what she or he is doing at all times. Turn the range so the cook can look into the oven without having to pull the food out.

Arrange everything that may drip or produce steam in one space. That is, all the ranges, steamers, stockpots, etc., should be set inside a curb with a drain.

We don't ask our employes to work eight hours a day on a cement floor. We give them a maple mat to stand on. There is nothing harder on back bones, nothing less resilient than a cement floor. Over this equipment we arrange a hood; into the hood we put a gutter which is connected with a vent, and the vent drips into the drain.

*Read at the last meeting of the American Dietetic Association, in Chicago, Oct. 24-27.

Around that we wire for electricity, and we have adequate bulbs. The inside of the hood is kept much cleaner and the chances for accumulated dust dropping on food is much less if the inside of the hood is well illuminated.

We also arrange over the tops of the ranges, because many of our cooks use top stove cooking very much, a cold water tap. It saves the back of the chef and his assistants not to have to lift an ungainly piece of equipment from the top of the range over to the sink and back to the top of the range. We bring the water to the range, turn on the tap and that is all there is to it.

I recommend strongly that you have at least three inches of air space under your range. When we opened our cafeteria here on Monroe Street, we had a fire the first day. Ranges must have air below, behind and at the sides. Then I would like to recommend the kind of range that saves the chef. There are now ranges on the market that are so arranged that all the heat is generated in the center. The heat is not blown in by a blaze across the front.

One man told me his kind of range was the best. He could get the front of it up to 1,500°, and he looked proud when he told about it. What on earth does anyone want of a range like that when water boils at 212°! That is an expensive range to buy.

There is a range that generates heat in the center and it is quite cool. I have worked in front of that range. The chef's temperature and temperament are kept at a good working pitch many hours of the day longer because he is not overheated.

Height of Sink and Tired Backs

The top of the range brings me to another hobby of mine,—the height of things. During the summer of 1915 I was busy building dormitories for students and had a great deal of unnecessary correspondence and many conferences with sink people in the United States. They wanted us to have sinks thirty to thirty-two inches high, and so I finally invited one of the salesmen to come in one day and wash dishes in front of that sink for half an hour to see if he would like to have it for his job. He said he guessed he wouldn't. We put our minds on getting that sink up and the standard height is now thirty-six inches. We have remedied this one thing in institutional work but the private home is still unaided. I would like to see the proper height of the sink made a requirement in every apartment house contract. The bottom of the sink should be brought up to fourteen inches. The sink should be of galvanized iron, welded, with rounded corners. The splash board should be at least ten inches up and a part of the drain board. To save the floor in front of the drainboard we put a little curb about three inches high so that the kitchen is kept in much more sanitary working condition.

The height of the range, the height of the cook's table, the height of the shelf under that table are other things which should be remedied. All shelves should be at least ten inches from the floor. The old baseboard used to be seven inches and we found you couldn't get a broom or a mop under a seven-inch baseboard to keep it clean. We raised it to ten and have had ample opportunity to try it out; it works.

The table is something that should be designed for efficiency. The type we recommend most frequently has a cold rolled steel top. It has a long drawer that opens at either end so that the employe working in front of a stove does not have to walk around the table. On top of this table should be a triple pot rack, supported and suspended.

Where refrigerators can be best placed is something to think over carefully. In one building I found that the refrigerator and the range were back to back and the management wondering why costs for ice were so high. Another thing that it is necessary to watch is the number of times refrigerators are cleaned, inside and outside. The question of lining is of vital importance. Spruce linings are perfectly good, but galvanized iron chips. One of the most important things to look to in a refrigerator is insulation. None of the fancy named packings are durable, every bang of the door jars them and they settle. The best insulation is cork board laid on in broken joints.

Now we come to the bake shop. This, by the way is a separate room. The chef and the baker are two artists. They are notoriously tempermental and do not get on where they have to work in close quarters. If you can give them each a working space which is his own domain, where he can be supreme, you get a much better product and you hold two efficient employes instead of two wrangling unhappy individuals. In putting in bake ovens and proofing boxes, allow a little space between. I have been in places where the proofing box was jammed up close to the bake oven. In planning a bake shop keep in mind the size of a great many of the tools, and give the baker elbow room and arm room, and lots of it.

Have everything that has to go out to the serving room on wheels. Pie racks should be made just wider than a ten-inch pie pan. These can be stacked up and run out of the bake shop.

When it comes to the question of labor-saving devices, let me say, have as many of them as you can afford to install. It is better to earn them before you put them in. No matter where you are your labor saving devices help you out, and if you know the principle of keeping them oiled and in working condition you have a satisfactory and adequate assistant, the value of which I think has never been estimated. Saving in labor and costs have never been adequately estimated. There is one thing, you can meter what they eat. I know just how much electricity and how much water they take and those are the things of which you can keep absolute control. I advocate that mechanical devices be installed as far as possible.

In considering kitchen equipment think of its relationship to the employes, and a good way to feature the things you are trying to get across is by means of an S.U.S. Club (Stand Up Straight Club).

If you aim to have things so that everybody does that there will be no bent backs in your kitchen.

NEWS ITEMS

Miss E. M. Geraghty is the new director of the department of dietetics at Lakeside Hospital, Cleveland.

Other changes of address have been reported to us as follows: Katherine Dixon has gone to Rome Hospital, Rome, N. Y.; Margaret Anderson left Cambridge Hospital and will travel in California for a time; Helen Clarke is studying at Ohio State University with a major in home economics and a minor in medicine; Carolyn King has gone from the University Hospital, Charlottesville, Va., to Grace Hospital, Detroit, Mich.; Bertha Baldwin, formerly at Freeport, Ill., is now at the House of Sarah Field Splint, New York, N. Y. Miss Baldwin is also conducting a department in the American Food Journal.

The Dietetic Association of Southeastern Michigan held a dinner on March 2 at the College Club, Detroit. Miss Rena S. Eckman of the University Hospital, Ann Arbor, gave a very interesting paper on "The Responsibilities of the Dietitian." Recent publications were discussed by Miss Wilson of Cass Technical High School, Detroit.

NUTRITION WORK IN A HOSPITAL DISPENSARY*

By ESTHER H. FUNNELL, Social Service Dietitian, Harper Hospital, Detroit

NUTRITION has come to mean more than the science of what to eat and why. At best, it is not easily defined and is difficult to determine because of the interdependence of the contributing factors one upon the other. In the present day vernacular, however, it has come to be used synonymously with the word health as applied to the child. Fritz Talbot has written: "Good nutrition means a well-nourished and developed child as described by a normal physical examination." Dr. Ira S. Wile concludes a discussion of the question as follows: "We now speak of nutrition as an index of health. Good nutrition is the equivalent of good health and malnutrition is the equivalent of ill health."

In recent years so-called nutrition work has become very popular and is an important part of the nation-wide health program which is being launched today. We will find the work being done in the form of health centers, nutrition classes and various other enterprises in connection with public schools and private organizations. Community houses, church societies, hospitals and welfare societies of all kinds are finding a place on their program of activities for nutrition or health work.

Every hospital dispensary should include in its plan for development, ample provision for the establishment of nutrition work. This work, however, will not be confined to the organization and conduct of nutrition classes for children. We will find here, as in the hospital itself, cases of diabetes, nephritis, gastro-intestinal disorders, and obesity, not to mention the large percentage of patients complaining of chronic constipation, all of whom will require dietary supervision. The person appointed to this work must be at once a nutrition worker and a dietitian. Her training for this undertaking should consist of at least a four-year course in an accredited school of home economics, with a thorough knowledge of food values, cookery and dietotherapy, as well as additional training in social service.

Dietitian Should Interpret Prescription

A competent worker of this kind will prove herself of inestimable value to the medical staff of the dispensary, if her position in the work is definitely understood. At no time should the dietitian attempt to diagnose a case and prescribe a diet for its treatment. Let the physician make the recommendation and the dietitian interpret this in terms which the patient can understand. She will be able to do this the more intelligently because of her knowledge of the dietary customs of different nationalities. She will not prescribe bread, in terms of slices to a Syrian patient when she knows the size and shape of the Syrian loaves of bread. Neither will she suggest beefsteak and lamb chops to a family dependent upon the department of public welfare for its bare existence. If as in so many cases today there is no income, the dietitian trained in social service will know the resources of the community from which she may expect to secure supplementary aid for the patient. When faulty food habits are due to ignorance, the dietitian goes into the home of the patient and in a friendly way can teach her how best to prepare her food according to the utensils available and the extent of her limited income. After extensive experience of this kind, she is able to judge merely from an interview with the patient approximately what is the home background and can better adjust the diet to the needs of the patient.

Many of the patients can be cared for in groups. At the present time there are a number of dispensaries which are featuring diabetic clinics. A clinic of this kind should be conducted by a physician assisted by a dietitian. The diet may be prescribed by the doctor in terms of grams of protein, fat and carbohydrate. The dietitian, in turn, works this out in terms of measurements of food, that is to say, in cups or tablespoons, and it is her responsibility to make this clear to the patients. Because the patients are all living at home and are not bed cases in a hospital, the fulfillment of the diet prescribed will be, at best, only approximately accurate. The Massachusetts General Hospital in Boston has a diabetic clinic attended by over 200 patients and the department reports splendid success. At the dispensary of the Lakeside Hospital in Cleveland, there is a similar clinic composed largely of the ex-hospital cases who report regularly to the diabetic clinic for supervision.

Group Work Yields Good Results

Of utmost importance to a dietitian doing dispensary work is a demonstration room where she may give actual instruction in food preparation. With this equipment she will have no difficulty in holding the interest of groups throughout a definite course of lessons. Constipation and obesity cases can be grouped most effectively and excellent results obtained by this form of treatment. The patients grow to enjoy the sociability which the group affords and the element of competition stimulates an interest in adhering to the diet advised. While this group work does not entirely take the place of the work done in the homes of the patients, yet it enables the dietitian to reach many more people than she could otherwise instruct individually and in some cases is conducive to better results. The dietitian has an excellent opportunity in these group meetings to instill the gospel of good cheer and place the premium upon good health rather than on letting the "best fellow" be the one who has been through the greatest number of operations.

The nutrition work with the children occupies an important place in the dietetic department. Nearly every mother who brings her children to the clinic is in need of advice as to the best food for the family. At this time also the dietitian can advise the mother how to purchase her food so that she will be getting the best for her money. In addition to the individual interview, there will be a place for the nutrition class. It does not matter materially, which of the many means of teaching health to children is employed. The New York Nutrition Council has placed a wealth of material at our disposal through its recently published Nutritional Bibliography. One method which seems to merit attention is the use of cooking classes or the occasional serving of cooked food. In this way children may be taught to eat foods which they would never learn to eat in their own homes. Here again the spirit of competition is an important factor. A child will eat cereal because all the other children are eating it. It is decidedly "the thing to do," and he does it. Lack of home discipline is one of the greatest problems with which the nutrition worker has to deal. She must also recognize the bearing of social and economic factors upon the subject of malnutrition.

*From a paper read before the annual meeting of the Michigan Hospital Association, January 18, 1922.

In organizing a dietetic department of this kind the dietitian may expect to encounter difficulties. There may be, at first, indifference on the part of the physicians who have been working for years without such a department. In any case she will have to begin in a small way and prove her work to be of such value as to justify, not only its existence, but its growth to a large scale.

Fortunately the establishment of such a department does not call for expensive equipment. The demonstration room should contain only such things as are essential for the preparation of food. The use of elaborate utensils in the demonstration will not help to meet the needs of the patients when we remember their modest supply at home.

In conclusion, there are many dispensaries today in which nutrition and dietetic work is proving itself invaluable. Various descriptions of this work are printed from time to time in hospital and social service publications. The hospital which plans to develop such a department at this time may indeed profit by the pioneer work already accomplished by others.

PENNSYLVANIA HOSPITAL DIETITIANS HOLD ANNUAL MEETING

The Pennsylvania Hospital Dietitians Society recently held it first annual meeting in Philadelphia. The society includes in its membership all dietitians who have received a dietitian's certificate from that hospital since the inauguration of a postgraduate course of nine months in 1916.

Miss Helen E. Gilson, chief dietitian at Pennsylvania Hospital and honorary member of the organization, reported before the meeting some of the achievements of the department since 1916. The following data were included in the report:

Calls for dietitians.....189
Positions filled by Pennsylvania Hospital dietitians 25
Positions filled by other hospital dietitians..... 29
Positions not filled.....135

The organization at its recent meeting voted to start a loan fund to assist students who wished to take the postgraduate course but were financially handicapped.

Officers elected were the following: President, Miss Sara Clark, resident dietitian, Girard College, Philadelphia; vice-president, Miss Mary L. Rhoade, resident dietitian, Coatesville Hospital, Coatesville; treasurer, Miss Vera Kendrick, resident dietitian, Episcopal Hospital, Philadelphia; secretary, Miss Mary S. Haines, student dietitian, Pennsylvania Hospital, Philadelphia; fifth member executive committee, Miss Helen C. Chase, chief resident dietitian, Philadelphia Hospital for Mental Diseases.

Other members include: Miss E. Elizabeth Allis, secretary, department of physiology, Yale School of Medicine, New Haven, Conn.; Miss Martha P. Deal, student dietitian, Pennsylvania Hospital, Philadelphia, Pa.; Miss Margaret S. Duren, resident dietitian, Eastern Maine General Hospital, Bangor, Me.; Mrs. C. Z. Moyer, nee Miss Ruth E. Gilpin, formerly resident dietitian, Presbyterian Hospital, Philadelphia, Pa.; Miss Emily B. Hall, assistant dietitian, Western Pennsylvania Hospital, Pittsburgh; Mrs. Gwendolyn S. Hubbard, resident dietitian, Ellis College, Chestnut Hill, Pa.; Miss Gertrude B. Humphreys, assistant resident dietitian, Philadelphia Hospital for Mental Diseases, Byberry City Farms, Torresdale, Pa.; Miss Lillian R. Hunter and Miss Helen Shepardson, dietitians, Bide-a-Wee Tea Room & Gift Shop, Jenkintown, Pa.; Mrs. D. W. Holt, nee Miss Helen E. Knaur, formerly dietitian, St. Agnes Hospital, Philadelphia; Miss Frances Lothridge; Miss Ruth Pelton, student dietitian, Pennsylvania Hospital, Philadelphia; Miss Florence L. Shipee, resident dietitian, Presbyterian Hospital, Philadelphia; Miss Elizabeth Stillman, chief resident dietitian, Columbia Hospital, Wilkinsburg; Miss Beatrice R. Teasley, resident dietitian, Davis-Fisher Sanitarium, Atlanta, Ga.; Miss Muriel R. Warner, resident dietitian, Lancaster General Hospital, Lancaster; Miss Suzanne S. Wood, resident dietitian, The Holyoke City Hospital, Holyoke, Mass.

NEWS ITEMS

Miss Ruth Evelyn Jenkins entered upon her duties as administrative dietitian, University of Michigan Hospital, February 1.

The Herman Kiefer Hospital of Detroit has lost the services of Miss Lulu Sidwell who is now connected with Sparrow Hospital at Lansing, Mich.

Miss Mary Cunningham has accepted a position at Finley Hospital at Dubuque, Iowa. She was formerly connected with Hanover Hospital, Milwaukee.

A tea room in Rockford, Ill., known as The Tavern, has recently been established by Miss Leonore Hurst who has given up her work at Rockford Hospital.

Washington Boulevard Hospital in Chicago has Miss Mary Sedgwick as new dietitian, and the Illinois Central Hospital in the same city, Miss Katherine Haupt.

Student training under Miss Florence Smith at the Potter Metabolic Clinic is being taken by Miss Edna Klumb, formerly at Dr. Lynch's Hospital for Diabetes at West Baden, Ind.

Miss Eva Schairer has resigned her position at the University of Michigan Hospital, Ann Arbor, to accept a position as instructor in the University of Wisconsin. She began her duties the second semester.

On January 27 the Chicago Dietetic Association held its annual banquet at the Cordon Club, 410 S. Michigan Avenue. Mrs. George W. Plummer, state parliamentarian of the Illinois Federation of Women's Clubs, addressed the association.

Miss Cecil Johnson recently completed a course of student training at the Olmstead Hospital of the Mayo group, and has been appointed dietitian at the Colonial Hospital of the same group. Miss Foley has given Miss Katherine Ryan of Madison, Wis. the appointment for student training.

Miss Tashion of Brooklyn Methodist Hospital has given Miss Elizabeth Cooper the appointment as her assistant, and Miss Jeanne Griffith has returned to Syracuse Memorial Hospital as assistant dietitian. Both of these young women are Cornell graduates and have recently completed a course of student training at New York City Hospital. Miss Griffith was at the Syracuse Hospital during the summer of 1920.

The February meeting of the Allegheny County Dietetic Association was held at the Western Pennsylvania Hospital, Pittsburgh. Dr. Taylor gave a very interesting talk on vitamines at the conclusion of a short business meeting. The entire dietetic department was open for inspection and many of the visitors took advantage of this opportunity. Miss Kate Helzer, assisted by Miss Emily Hall, proved a charming hostess in the social hour that followed.

At the January meeting of the Chicago Dietetic Association, the annual election was held. The following officers were chosen: Miss Anna Boller, president and chairman of the infant welfare committee; Miss Breta Luther, Cook County Hospital, vice-president and chairman of the program committee; Miss Elizabeth Tufts, Wesley Memorial Hospital, secretary; Miss Clara Smith, assistant dietitian, Presbyterian Hospital, treasurer.

Other members of the executive committee are: Mrs. Esther Ackerson Fischer, chairman of membership, and Miss Rose Straka, chairman of publicity.

"The best popular test of ventilation, besides affecting everybody's senses, is the length of time which most houses retain the smell of dinner."—Florence Nightingale.

Hospital Equipment and Operation

With Special Reference to Laundry, Kitchen and Housekeeping Problems

Conducted by FRANK E. CHAPMAN, Director
Mt. Sinai Hospital, Cleveland, Ohio

HOSPITAL SIGNAL SYSTEMS

By E. NEWTON-WELLS, Signal Engineer, Chicago

ELECTRICALLY operated signal systems such as nurses' call, physicians' location systems, physicians' in-and-out registers and privately owned and operated telephones are now recognized as a necessity in the modern hospital. Such systems should be planned by a competent signal engineer or an architect, specializing in hospital work, since there is no set rule or stock plan which is applicable to all hospitals. Each hospital presents a different problem for the experienced engineer to solve, one requiring careful study and application to cope with existing conditions due to architectural design of the interior, number and location of corridors and chart rooms and division of supervision for both day and night service.

I will first take up nurses' call systems, and for the purpose of this article will divide hospitals into three classes: General, tuberculosis and neuropathic, each of which should be equipped with a system designed to meet its particular requirements. The hospital taking general cases should be equipped with what is known as a "regular" or straight system, with the exception of the major operating and delivery rooms, which should be equipped with emergency calling devices.

The tuberculosis sanatorium and the hospital devoted to the care of mental cases should be equipped with what is known as a duplex system, being a combination of the "regular" and emergency systems. In tuberculosis sanatoriums the emergency system is operated by the nurse to summon assistance in case of hemorrhages by pressing a special button located on the station plate. In neuropathic hospitals the emergency system is operated by the nurse to summon assistance if the patient becomes dangerously deranged or unmanageable, and is operated by inserting a circuit-closing attachment into the station plate. The emergency feature cannot be operated by the patient.

Signals Should Be Audible

In general hospitals the system should so operate that when a patient presses a button the action will light a white lamp directly over the door of the patient's room and a similar visual indication will be shown on the annunciator or pilot station in the chart room, diet kitchen, utility room, or junction of corridors, to give the nurse definite guidance to the patient's room. In major operating rooms and delivery rooms, where emergency equipment should be installed, the system operates as described above except pressure on the button causes red lamps to be lighted at the various points mentioned.

As a means for the patient to attract the attention of the nursing staff, an audible signal should be provided, since a nurse cannot be expected constantly to watch the visual signals. The audible signal is essential for night service when a minimum staff is on duty.

In "regular" systems this audible signal should be momentary and should be given on a mild toned buzzer, while in emergency systems it should consist of a mild toned bell so adjusted to the surrounding conditions that the volume of sound will be sufficient to attract the attention of the nurses and yet not disturb the patients.

The clearing out of calls should be done at the actual bedside of the patient and not at the annunciator, pilot or entrance to the patient's room. This insures the recording of the call until actually taken care of and prevents the neglect of patients.

System Should Be Simple

The system should be effective and simple in construction; complicated mechanism should be avoided. The average hospital engineer is rarely, if ever, familiar with highly technical and complicated electrical mechanism and cannot keep it in repair. It occasions the calling in of outside electrical men at considerable expense to the hospital and annoyance to the patients. In the patient's room no apparatus should be located that cannot be replaced, when out of order, by the nurse on duty. Apparatus should be interchangeable so that the nurse need not require the assistance of a mechanic or the use of tools.

It is also the writer's opinion, substantiated by a number of prominent medical men, that the only successful type of nurses' call system is the push button on the patient's bed. A call may then be accomplished without the slightest exertion on the part of the patient, whereas types of apparatus requiring the patient to reach for a button or pull a string necessitate more or less physical exertion. In some cases it is absolutely essential that the patient refrain from any such physical exertion; or it may be impossible for a patient to raise his arms.

Room and Floor Indicators

In a small three-story hospital of fifty beds, having one straight corridor on each floor, with an unobstructed view from end to end, a system consisting of patients' calling stations and corridor door lamps, with the chart room, diet kitchen and utility room, respectively, equipped

with pilot stations of the floor-indicating type so arranged that the signals from one floor will be repeated on the other floors, would be ideal for both day and night service.

Large hospitals, E, H, L, T or U shaped, require entirely different treatment, and should, in addition to the patients' calling stations and corridor door lamps, be equipped with direct room-indicating annunciators or direct indicating pilots to show the section or corridor from which the call originated. Local conditions may prove to be such that in addition to the above, master pilots located at corridor junctions may be necessary.

Tuberculosis sanatoriums should be equipped in such a manner that the patients' calling station and corridor door lamp are connected in multiple with similar equipment on the sun porches. Then when a patient is moved from the room to the sun porch the calling cord may be disconnected by the nurse from the room station plate and inserted in the porch station plate. With such an arrangement a nurse traversing either the interior corridor or the sun porch will receive a definite location from the patient's call.

Conflicting Signals

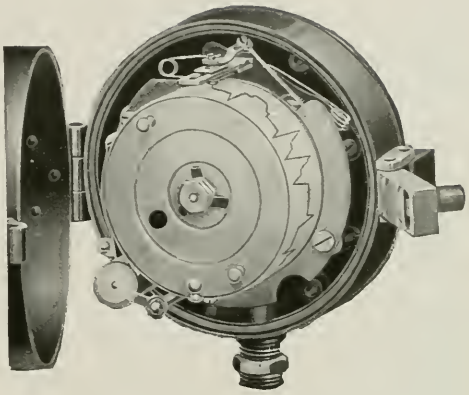
Confusion resulting from conflicting lamp signals or audible signals should be avoided. Lamp signals should never be mounted on the ceiling, as the lamps used in illuminating the corridors are apt to confuse the nurse; so located they are too high to be seen readily and to advantage. A lamp of low wattage enclosed under a small opaque glass cover of the dome type gives a softer and more evenly diffused light and consumes considerably less current than a larger lamp of the clear open type with its attendant glare.

The audible signal at the nurses' station should be given on a mild toned buzzer. Adjacent buzzers for other purposes result in untold confusion. Such signals as main entrance, ambulance entrance, local telephone and dumb waiter should also be given on bells of mild tone, but where more than one bell is located in the same section volume of sound, penetrating qualities and length of sound waves should be considered. Bells adapted to the peculiar uses should be selected, such as the wood, sleigh, tea or cow type gong, or standard gongs of suitable dimensions to give forth sufficient sound to attract the attention of the hospital staff and yet not annoy the patients. The material on which such equipment is to be mounted plays an important part in the results obtained; for instance, a mounting on a hollow wall partition causes the bell or buzzer to give forth a larger volume of sound, whereas a mounting on a dead wall has the opposite effect.

My next article will deal with physicians' location signals and registers.

A PRACTICAL INSTRUMENT FOR RECORDING AMBULANCE PERFORMANCE

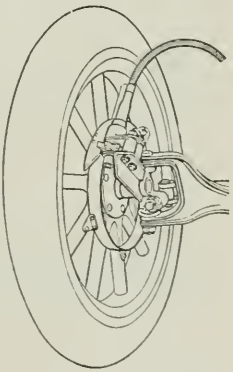
Many administrators have been searching for an instrument that would serve as a definite check upon the performance of their ambulances and trucks. Such an instrument is now on the market and has proved its value in a number of instances. Together with the "ambulance call" slip which should show time of receipt of call, time ambulance left its station and time of arrival at hospital with patient, this instrument permits of an absolute check of the service. The illustrations shown



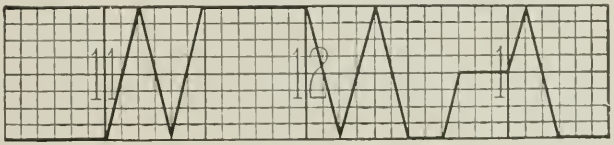
portray the mechanism of the instrument and the record it makes.

Speeding, joy-riding, unnecessary delays, excuses for neglecting minor repairs, and numerous other complaints that come to the superintendent's desk, because of improper chauffeur service, can be controlled.

The recordograph is a practical instrument, simple, accurate and tamperproof; the record it writes of each movement or stop permits of a detailed analysis of the operation of ambulance or truck, including mileage, running time, speed and stops. Increased efficiency has followed in instances where it has been installed.



The instrument consists of three main parts, the clock, recording device and pencil mechanism. The recording mechanism is a flexible worm shaft, driving a worm wheel, which in turn rotates an eccentric cam. A tape is threaded into the clock drum and the pencil which is actuated by the eccentric cam produces a clear and concise record on the tape. This record can be analyzed (at the hospital or through the service bureau maintained by the manufacturer) to furnish extensive data that will serve as a means of curbing waste and increasing efficiency. Each tape is thirty-six hours long, divided into hourly periods, which are further subdivided into five minute periods. A horizontal line on the tape indicates the length of stop. When the ambulance moves, an oblique line is traced by the pencil. Horizontal lines, divide the tape into squares, each square representing one-quarter mile. A complete oblique line across the tape represents a movement of two miles and the angle of obliquity represents the rate



of speed. A scale for interpretation is furnished with each instrument.

In several instances where the equipment is in use, it has been dubbed "the man in the box" by the chauffeur and has substantiated the manufacturers' claims.

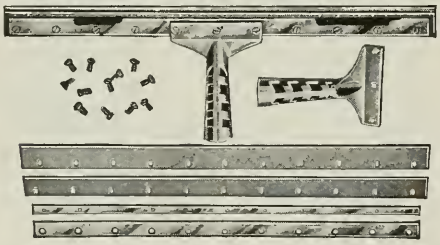
A SIMPLE FIRE EXTINGUISHER

A number of hospitals are now employing a new type of fire extinguisher that is apparently well adapted to institution use. The extinguisher in appearance is very similar to the small automatics widely used. It is of the soda and acid type and is extremely easy and inexpensive to recharge. The liquid discharged from it is absolutely harmless to all fabrics and woodwork as well as to the operator.

The method of operation should appeal to every one who has had experience with the ordinary type of small extinguisher. In order to discharge the extinguisher, all that is necessary is to hit the plunger a sharp blow on the floor. This drives the plunger into the lead capsule and opens the extinguisher which then throws a continuous stream. The method is far more sure than the hand operated valve or pump type extinguisher, which is liable to corrode and thus fail to operate when an emergency arises.

SQUEEGEE CAN BE RENEWED

The idea that window cleaners can be renewed is by no means of recent origin. A new window cleaner, however, has just been placed on the market which offers a number of points of apparent superiority. The illustration



shows the outfit both assembled and taken apart. The handle and upper bar are of aluminum; the lower part is of brass with two strips of heavy red gum rubber instead of the customary single strip. Only brass screws are used and these are threaded into a brass plate; this prevents the threads from becoming worn or the screws becoming rusted, the two greatest drawbacks to renewable cleaners in the past. When the rubber strip becomes worn, it requires but a moment's time to replace it and the cleaner is again as good as new.

A NEW RENEWABLE FUSE PLUG

While renewable fuses are by no means new, there has recently been introduced a new fuse which should appeal to hospital executives. Not only is the new fuse said to be absolutely safe, but it can be renewed with ease and rapidity. The illustration shows the three parts of the new fuse plug, consisting of the body, cap and refill. The cap and body are made of heat-resisting molded insulation and are unusually strong so that there is little likelihood of damage either from dropping or from the repeated blowing of the fuse element.

The refill is an ingenious little cartridge properly vented for the ignition of the gases formed when the element vaporizes. The rating of this element is stamped on both ends of the cartridge so that it is always visible through the aperture in the cap regardless of how the refill is inserted in the body. The cost of this refill, it is said, is only that of a postage stamp. When a fuse hap-

pens to burn out, all that it is necessary to do is to unscrew the cap from the body and drop in a new cartridge. The entire operation requires but a moment and is accompanied by no danger of shock such as often threatens when fuses are hurriedly replaced.

Any rating can be secured from three to thirty amperes, and the exact rating is visible at all times. This enables each circuit to be properly fused to meet existing requirements. Circuits having heating pads and other electrical appliances naturally require a higher current than the ordinary lighting circuit. With the new renewable fuse, dangers of over-fusing and under-fusing both are eliminated.

FOR MEASURING MINIM DOSES

The accurate administration of minim doses of drugs or medicines is a vexing problem in the hospital. At present dependence is generally placed on the drop to measure volumes less than a dram, notwithstanding the fact that this is an uncertain and an unreliable method. As is well known, the drop varies in size, not only according to the nature

of the liquid and the surface from which it falls, but also with temperature, rapidity of dropping and other factors.

To overcome this problem there has been recently devised a dropper so graduated that a dose may be measured accurately from one to twenty minims.

While this new dropper or pipette will be generally used, its value in pediatrics will be particularly great, as the ability to measure small doses accurately is of great importance, on account of the greater delicacy of young patients and also because of the care necessary to avoid gastro-intestinal disturbances which frequently follow the giving of large amounts of syrupy and strongly alcoholic vehicles.

"It was the primal struggle between the leader and the follower, between the representative and the represented. And it is a never-ending conflict. When the leader gains a small advantage, the pendulum of civilization swings toward aristocracy and when the follower, beginning to think, beginning to struggle, gains a small advantage, then the pendulum inclines toward democracy."—Grayson.

AN IMPROVED COFFEE MAKING PROCESS

Uniformly good coffee is extremely difficult to prepare, not only in hospitals but in any place where the beverage is served in quantity. Difficulties in maintaining the coffee quality can almost invariably be traced to carelessness in its production due to improper care of the urns, temperature of the water used in making, temperature at which the coffee is served, protracted leaching, or the use of old coffee mixed with new.

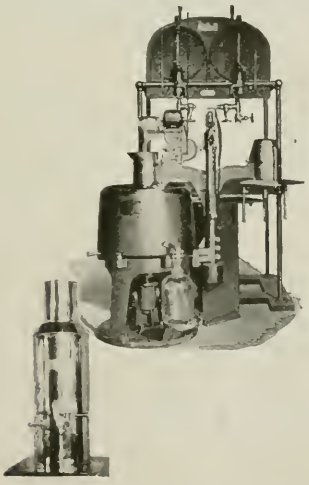
A new process in coffee making has recently been perfected which offers many advantages to institutions dispensing 500 or more cups a day. Those responsible for this new device have apparently made an exhaustive study of the chemistry of coffee and have based their process upon the results of these investigations.

The characteristic smell and taste of coffee, technically known as the aroma and flavor, are derived exclusively from the volatile oils extracted from the coffee bean. With the exception of a slight bitterness and acridity, caffeine, the active principle of coffee, is almost tasteless. Most of the bitter taste usually encountered in coffee, which commonly arises from protracted boiling or leaching, is due mainly to the tannates and resins in the coffee, both of which have injurious effects upon the human system.

Has Infuser and Dispenser

The new process includes two devices, one for infusing and the other for dispensing coffee beverage.

The coffee infuser extracts the volatile oils, i. e., the



The upper portion of the illustration shows the two units of the coffee infuser, consisting of the infuser proper, or extractor, and the accompanying hot water unit equipped with thermostatic control. The smaller illustration in the lower left hand corner shows the coffee dispenser required by this process

desirable element, from the coffee bean and leaves the deleterious ones behind. The infuser is about the size and appearance of the ordinary centrifugal machine such as is used for the drying of clothes in laundries. It is in fact a centrifugal machine, the principal part of which is a revolving basket. This basket is the retaining wall for a cylinder of pulverized coffee through which a volume of boiling water is forced in something less than 38 seconds. The process is so complete that the discarded coffee grounds are without coffee flavor or aroma.

With each operation of the infuser a gallon of liquid coffee known as "coffee base" is obtained, which will serve upwards of 128 cups of strong coffee. The "coffee base" thus produced does not need to be immediately used, but can be transported to various parts of the institution and utilized as needed during the day. This permits the making of all coffee in a central kitchen.

A special dispenser is essential for the proper serving of the "coffee base." This dispenser has much the appearance of the common type of coffee urn, upon which open bottles of "coffee base" are inverted in the same manner that water bottles are placed on water dispensers. The coffee dispenser is of clever design and provides means for automatically combining the "coffee base" with hot water in predetermined proportions so that it is possible to serve the coffee at any desired strength. When the proportions of water are determined each cup of coffee served will be of identical strength. Furthermore, a special mixing faucet is provided which locks thermostatically unless the service water is at or above a given temperature. This insures the serving of coffee "piping hot" at all times.

Economy Is Claimed

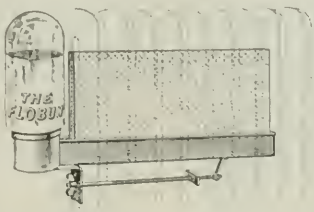
Many economies are claimed through the use of the infusion method in the hospital. Operation of the machine requires no skilled attention, it being virtually automatic. Claim is made that the process allows a conspicuous saving in the sugar and cream bill. The major part of the natural sugar always present in good green coffee is extracted from the bean by the infuser, and the coffee is, consequently, slightly sweet. Cream is used in ordinary coffee to cover up the more or less bitter taste frequently present. As a result less cream and less sugar are said to be desired in coffee made by the infusion process. Another distinct advantage claimed for the infusion method in institution use is the fact that it is possible to supply coffee of varying strength to meet possible clinical requirements.

The manufacturers also cite numerous cases of individuals, who unable to drink coffee made by the common method, have experienced no discomfort from its use when prepared by the infusion process.

A NEW HUMIDIFIER

The importance of maintaining a proper degree of humidity in hospitals and public buildings is recognized alike by hospital executives and sanitarians.

This is particularly a problem of the winter months when windows are closed and when the heating plant dries



the air. In many hospitals the humidity falls as low as three per cent and unless artificial means are used for increasing the natural humidity, it rarely rises above twenty per cent.

A new device, which supplies the necessary moisture for maintaining the proper degree of humidity in the room, has been recently introduced for attachment to standard types of radiators. The outfit in brief consists of an absorbent pad inserted between the columns of the radiator, the bottom edge of the pad resting in a runway or trough, which in turn is connected to a glass water container projecting at the side of the radiator. Capillary attraction draws the water from the trough into the pad where the large exposed surface insures rapid evaporation.

With this outfit it is claimed that a relative humidity of fifty per cent can be maintained with no cost of maintenance except the replenishment of the water supply. It is said that the new humidifier when attached to the ordinary steam radiator at a normal temperature will evaporate a gallon of water a day, giving evidence of the practical value of the device.

The outfit is attractively finished and does not detract from the appearance of the radiator.

AN IMPROVED WASTE RECEPTACLE

Of the many types of waste receptacles offered for hospital use those with a cover which can be automatically raised by means of a foot pedal are preferable. A new type of such waste receptacle, which includes a number of interesting features, has recently been introduced on the hospital market.

The outfit itself is substantially constructed. The pail, cover and frame are of heavy steel, finished in white enamel; working parts are made of brass, nickel plated. As will be seen from the illustration, the cover is not hinged to the pail as is ordinarily the case in similar outfits. This fact permits the pail to be removed from the base without the cover, simply by pressing the foot pedal and thus raising the cover. The cover is attached to the lifting device by a thumb screw and if it is desired to remove the pail with the cover on, it can be readily detached.

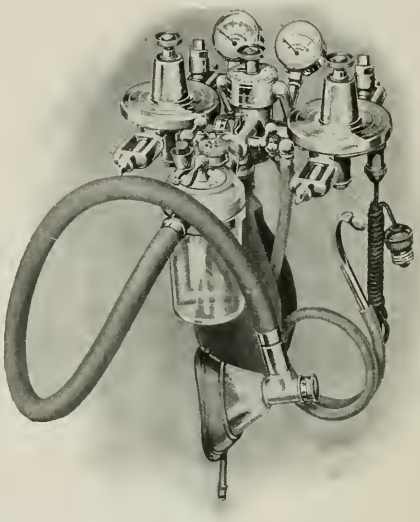
Probably the most interesting feature of this new outfit is a disinfecting and deodorizing device incorporated in the cover. The device consists of a small chamber in which cotton or other absorbent material may be placed after it has been saturated in any standard disinfectant or deodorant. While this method of disinfection is probably not entirely reliable, yet it is undoubtedly of some value—particularly in neutralizing objectionable waste odors.

In many hospitals a waste receptacle of this kind is used not only in operating and dressing rooms but also in main and service kitchens as a garbage container.

AN IMPROVED AUTOMATIC ANESTHETIZER

One of the well known manufacturers of anesthetizing equipment has recently introduced a new unit offering many interesting features.

This unit provides for administering anesthetic combinations as follows: nitrous oxid-oxygen, nitrous oxid-oxygen-ether, oxygen-air-ether, oxygen-ether, air-ether, ether.



Switches from one method to another are made with ease and with no disturbance to patient, surgeon or anesthetist. So smoothly are the various sequences entered that none but the anesthetist, it is said, is aware of the change.

The apparatus illustrated herewith has incorporated in its center head casting the bag shut-off valve, which for other models is a separate accessory. In the improved construction the sliding cam which opens and closes off the bag may be operated manually or automatically by the emergency oxygen stopcock.

The outfit also is equipped with direct nitrous oxid connection for supplying an unlimited volume of nitrous oxid. Automatic shut-offs are incorporated in the cylinder yokes.

A most distinctive advance in surgical gas apparatus construction from the standpoint of safety, however, is the positive pressure regulating valve which measures and indicates the maximum pressure being exerted on the lung of the patient and furnishes an automatic spillway. Adjusted at from five to five hundred MmHg pressure it becomes an indispensable element of safety in anesthesia for major surgery when both nose and mouth are covered by the inhaler.

NEW POLYCLINIC IN CHILE

The Ligade Higiene Social of Santiago, Chile, has begun the construction of a large polyclinic. The placing of the cornerstone became a public celebration, being attended by the president of the republic and the diplomatic corps.

OCCUPATIONAL THERAPY AND REHABILITATION

Conducted by HERBERT J. HALL, M.D., President, American Occupational Therapy Association, Devereux Mansion, Marblehead, Mass., and MRS. CARL HENRY DAVIS, Advisor in Occupational Therapy, 825 Lake Drive, Milwaukee, Wis.
Co-Editors: LORING T. SWAIM, M.D., 372 Marlboro St., Boston Mass., and MISS MARY E. P. LOWNEY, Room 272, State House, Boston, Mass.

REHABILITATION OF DISABLED MEN IN RELATION TO THE FAMILY

BY ELLEN G. HOFFMAN, WASHINGTON, D. C.

THE family group constitute one of the foundations upon which rests our highest culture, and it would seem that upon its well-being finally depends in large measure the strength and wholesomeness of every government. From the viewpoint of public welfare, which is considered the proper viewpoint, the reeducation of a disabled man cannot be successfully carried out unless linked with the interests of his family. The broken motor of a car after being thoroughly repaired is still of very limited use without frame, body, and wheels. So with the broken man, the most complete rehabilitation cannot usually be reached unless his interests are considered in connection with those of his family.

HELP OR HINDRANCE?

When another factor, in the person of the disabled man's family, is introduced into his problem it of course becomes more complex. The social worker must be the one to deal with this new factor, the methods varying according to the circumstances or the attitude of the family.

The family may give help of a high character, but this is unfortunately rare. More often the family adds to the disabled one's burden by helping to develop in him an attitude of self pity. Or they may pour out their financial and other worries which for the very reason that he is helpless to change them worry him most of all. It is for the social worker to help solve the difficulties and to enlist the determined cooperation of the family in carrying out a program of rehabilitation.

Family Often Complicates Problem

As the number of problems in any enterprise depends largely upon the diversity of interests involved, so the work of reconstruction of the disabled man is apt to become more intricate when the interests of his family are considered, though this is not always the case. Some of the difficulties that arise are easy of solution, but others are extremely hard and require upon the part of the social service worker a broad sympathy, a real knowledge of human nature, and an abundance of tact and common sense. The methods to be employed vary with each set of circumstances and with the temperament of each individual with whom the worker has to deal. Probably the greatest need of the disabled citizen is not a fine course of study, or a wonderful school equipment or a splendid building, but a wise guidance by one fitted for the task.

The Israelites in Egypt could not make bricks without straw. Neither can the maimed man be rehabilitated unless he has within him some of the elements of self-help. But that is not enough; he must have outside assistance as well. And fortunate indeed is he who has in his family some one who really understands his needs and knows how effectively to minister unto them. However, such family help of a high character is quite rare, and the guidance of the trained worker in the reconstruction field becomes a necessity in most cases, not only for the man but for his family as well.

Any discussion of the subject at hand should include a mention at least of the young man who, though without any kind of a family at present, is nevertheless the potential head of one that may be found in the future. He is frequently without opportunity to come in proper contact with suitable members of the opposite sex, when helpful associations of that nature would form the biggest single element in his return to useful citizenship.

Henry Todd was twenty-one, unmarried, and without a family or close friends. He was keenly interested in outdoor sports, had been an ardent dancer, and had planned a business requiring the active use of two stout legs. An amputation at the left knee threw him into the depths of despair, from which he stubbornly refused to rise. He felt that he could never marry, and that he was on the scrap heap, and he talked frequently of suicide. Through the wise ministration of a social service worker, he was cheered out of his despondency, was induced to take a course in telegraphy and was interested in social activities. The latter brought the acquaintance of a capable young lady of his class who encouraged him further and whom he finally married. The result is a happy and prosperous home.

Carry Message of Good Cheer

The first message to carry to the disabled man is the message of good cheer. No matter how optimistic his nature may be, he cannot at all times keep in buoyant spirits, and if he is inclined to be pessimistic, he will envelop himself in gloom. A hope, founded on good rea-

sons, is the best tonic he can be given. All too frequently, his family will unintentionally drive him to a deeper quagmire of despair rather than pull him out.

A soldier who had been gassed, developed tuberculosis. He also had been operated upon for a serious wound. He had a wife and infant child, and the family possessed very scanty means. The wife visited the husband daily in the hospital and thoughtlessly poured into his ears a stream of lamentations. The patient seemed to have lost all hope and grew steadily worse. A social service worker took the matter up with his wife and in a heart-to-heart talk convinced her that she was exerting a detrimental influence upon her husband. Part-time employment was secured for her which somewhat relieved the family financial difficulties. She completely reversed her attitude toward her husband while in his presence, to his great pleasure and benefit. He recovered sufficiently to leave the hospital and through the efforts of the social service worker secured a job as chauffeur in Colorado, where he is now enjoying reasonably good health and is supporting himself and family in comfort.

Must Not Develop Self-Pity

The development by family and friends of a feeling of self-pity in the mind of a disabled man presents a common problem in reconstruction work. Such an acquisition is a constant burden upon the injured man, always retarding and sometimes destroying his chances of rehabilitation. The duty devolves upon the social service worker to change, if possible, the conditions which produce such results.

A devoted, but somewhat impractical, widowed mother was the daily companion of her only son, who had lost his right hand and a foot. She was in good financial circumstances, but the injuries to the boy demanded a change in a program for him. She looked upon her son's condition as wholly irremediable. She constantly carried this feeling to the young man by suggestion. Her most frequent salutation to him was, "You poor boy!" She emphasized the importance of the fact that she had enough money to care for him always in his dependency. She wept at the fumbling efforts of his left hand. As a matter of fact, having youth, good health and financial independence, the young man had much to be thankful for, but he was devoted to his mother and she developed in him such a feeling of self-pity that he made very poor progress. It was not feasible to keep the son and mother apart. The mother was importuned to change her attitude, but without avail at first. The family physician was called in to plead with her, and then her pastor. She made promises but seemed unable to keep them when in the presence of her son. Finally the social service worker in charge of the case devised the plan of meeting the mother each day just in advance of her visit to her son, and fortifying her with a carefully prepared program of what to say and do while with the boy. Strange to say this rather artificial scheme worked out well in actual practice.

THE SEWING LADY

"Occupational therapy aide" is a formidable name, quite beyond the powers of comprehension of the average hospital patient. Many are the amusing designations which have been applied to the busy young women who bring work and cheer to the bedside. "Sewing Lady" is not bad. One of our aides commonly goes under this name. This particular aide was surprised to have a new patient burst into tears and hide her face in her hands when approached in the usual cheery manner. A little tactful inquiring disclosed the reason. The patient thought that the "Sewing Lady" was about to take out the stitches in the laparotomy wound.

Discouragement and discontent and a consequent slow recovery on the part of the disabled man do not always arise on account of his own condition but frequently come from worry over the problems which confront his family. The social service worker must relieve his mind in these matters, and to do so, must attempt the solution of the family troubles. Financial difficulties and ill health are the most common of these. An employment service to relieve the first trouble has in some cases accomplished wonders. Sometimes the securing of temporary loans is necessary, and again the public poor fund or some other charity must be called upon. The matter of the family health may be attended to through personal ministrations of the worker and the public health authorities and philanthropic societies. In this way assurances may be given the disabled man that his family is not in danger of suffering.

A Victim of Circumstances

Sometimes these family troubles appear upon the criminal dockets of the courts. Patrick and Timothy Murphy were orphans, brothers and pals. Pat was nineteen and Tim was twenty-three, and the latter, in addition to being a pal, was also a father to the former. Tim was in the thick of the fight in France, while Pat was left behind without the beneficent guidance of his older brother. Later Tim's crippled body was brought to Walter Reed Hospital in Washington about the time that Pat, charged with a felony, was incarcerated in Cook County jail in Chicago. A letter from the younger boy, telling the story of his trouble, reached his brother. The latter was very seriously wounded, but the tribulations of his "Little Pat" gave him much more concern than his own bodily ailments. A social service bureau in Chicago was asked to investigate Pat's case. It was found that he was largely a victim of circumstances, bail was secured for him and later a parole. He went to Washington, secured a job and not only greatly aided in his brother's rehabilitation, but did a large amount of volunteer reconstruction work for others.

Families Often Asset in the Work

It should not be assumed, however, that in the work of re-educating disabled men, the members of their families are always liabilities. On the contrary, probably a majority may be made genuine assets in the work. When through interest in a crippled husband, brother or son, there comes to an individual an understanding of the real meaning of the rehabilitation program, such a person frequently becomes an enthusiastic and permanent volunteer in social service labor. It is from this angle that some of the most desirable results may be obtained. It is therefore of special importance for the social service worker to impress upon the families of men being re-educated, the significance of the work in its broadest sense, and apart from its application to a single individual.

A sister, whose brother was being treated at Lakewood,

N. J., was a social butterfly. She was financially independent and led a useless, namby-pamby existence. Her mental endowment was good, however, and without particular guidance she was able to and did render a fine service to her brother. The worker in charge thought she saw an opportunity to secure a useful helper, and tactfully impressed upon the sister the great importance of reconstruction work. The result was that the latter, becoming enthusiastic, dropped almost entirely her old social activities, and is now devoting her time, money and energy to intelligent and effective rehabilitation service.

The education of a collegian is not completed with his commencement exercises. Neither is the work of rehabilitating a disabled man finished when he leaves the hospital or the school. Nor is the association of the social service worker with the man or his family terminated at that time. The cripple still needs proper support, and much of this must come through the worker in cooperation with the disabled man's family. For lack of that support, he may have to return to the hospital or the school, discouraged at the reverse, thus retarding his final recovery. Above all things the atmosphere of the home must be made sensible and helpful. Wrong attitudes in hospital and school are likewise wrong attitudes in the home to which the disabled man returns. Sanitation, health, food, medicine, employment, all these must be considered in a spirit of sympathetic and cheerful helpfulness, but without maudlin sentimentality.

It is important that the reconstructed man's employment be secured and held upon the basis of merit, rather than upon that of charity. The man himself must be made to realize that he is a real factor in his country's life, that his services have an actual value, and that he is not a dependent upon public bounty. This should be the attitude of the employer and the public. Education is necessary to bring this result, and the family, through wise direction, may be made a big factor in developing in a community such a viewpoint.

"In union there is strength," and through the intelligent cooperation of families of disabled men much good may come. The direction of such cooperation furnishes a broad field for the activities of the social service worker. The fine spirit that may be thus developed often comes as a most pleasing surprise. It is of the same character as that of the Pilgrims on New England's rock-bound coast, or of the early pioneers in the West. With common experiences, common hardships, and common problems, the commonplaces of life take on new values to these people. Narrow selfishness is succeeded by a happy spirit of mutual help. In the organization of their combined activities greater efficiency is of course obtained. This means more successful efforts along all lines and consequently fewer failures. The morale of the family is improved, and this healing influence is necessarily extended to the disabled man either in or out of the school or hospital.

And so it would appear that the salvage of the man from the wreckage of war and industry is peculiarly a family problem. The interests of the disabled cannot be separated from those of the family. The development, the welfare of the family as a whole, is a cause worthy the earnest thought of every patriotic citizen.

"A half-educated man knows enough to criticize and abandon the customs of his fathers, but not enough to preserve their merits or to improve their defective parts." —Thorndike.

WHAT DAVID BELASCO SAID

David Belasco at a recent dinner in New York in celebration of his fortieth year as play producer made the following remark: "I believe that God meant us to work. I believe He meant us to earn our living by the sweat of our brows. But I believe He meant us to love our work so much that we might play at it, find real and profound pleasure in it and so labor on. . . . The curse of our times is the vast army of people who care nothing for their work, who labor solely for money."

There is an immense amount of wisdom packed into these few words. Perhaps a great deal of our social and industrial unrest would be cured if by some miracle the love of work could become the rule rather than the exception.

Those who have studied the industrial situation keenly and with an appreciation of the human elements involved are inclined to believe that automatic machinery, valuable, indispensable as it is, has not been an unmitigated blessing. Throughout the field of manual labor, the machine has been slowly but surely leveling the worker to a plane where thinking, where pleasure in production is largely lost. The men who invent and build the machines doubtless have a very good time doing it, but they are few. The machine work is now so subdivided that thousands and thousands of workers go through a few unvarying motions day after day, year after year. The efficiency experts, who probably love their work, study photographically and otherwise those few human motions, and simplify them until individuality is as far as possible eliminated, and the workers become themselves machines automatically feeding other machines. It is hard to imagine much joy in such a life even if the pay is adequate and the hours are short.

Perhaps some men come to love the machine that punches holes in an iron plate seven hours a day, diversifying the process once in a great while by punching holes in the hand of the operator. Possibly there are large classes of men who would be capable of no broad horizon and who are well enough off as they are. Doubtless the machine has come to stay, and we may as well make the best of it, which may not be so bad after all since it makes available so many luxuries and necessities.

But it can be said without much fear of contradiction that unless the factory worker finds some real diversion, some great interest outside his work, we are likely in time to suffer pretty devasting social and industrial effects from the distaste for work which seems to be growing rather than diminishing.

Competent observers think that the working men and women literally do not, as a class, know what to do with the opportunities that daylight saving and shortened working hours have afforded. There are the movies, of course, playgrounds and museums, church and home interests, but on the whole the prospect is pretty bleak for the man who is earning only just enough to live on. Even the solace of the saloon is now removed, with benefit no doubt, but as yet there seems little enough to take its place.

What has this recital of well known facts to do with occupational therapy? Just this, that when accident or disease sends the factory hand to bed in a hospital, there is a chance, a slim one, perhaps, but a chance that he may have a taste of really interesting work for pleasure and profit, that he may learn what it is to make play of work, that he may acquire a hobby. The bedside crafts may help him to revert in mind, at least, to the good old times when peasant crafts were so satisfactory a part of daily life. If the making of wooden toys in the hospital

helps him to get well, clears his eye and strengthens his hand, the wholesome human interest of the thing may decide him to keep on making toys for his children or his neighbors' children in the spare hours at home after his recovery. Would such an experience make him more dissatisfied with his little detailed part of the great factory system? I hardly think so. The occupational aide, if she has vision, may even help her patient to see the advantage of becoming interested in the end product of the factory, may even teach him a new pride in his small but indispensable part of the great whole. A dream, a fancy? Well, perhaps, but suggestion and the kindling of imagination are not small forces in this world of grim realities.

What if through the thoroughgoing application of curative craftswork in the hospitals we should popularize again some of the old folkcrafts to fill in the winter evenings at home? What if we should succeed in giving a whole army of cripples a partial livelihood? Perhaps there is more to occupational therapy than we have yet dreamed of.

Every O. T. worker of experience has seen hard, rebellious men and women soften and become teachable under the influence of quiet work, of work which does not crunch and tear with the ferocity of the power driven machine, but which may carry over into the machine life a new sense of humanity, a growing love of creative accomplishment. Not once in a thousand times would such a thing happen, but that once is worth while, and who shall say how far the influence might reach!

In helping the handicapped to use again their broken faculties, we can hardly be said to be making much headway against the great unrest, but it is something if here and there we can give a man pleasure in work, though that work may be in itself of the very slightest consequence.

COMMERCIALISM

Should occupational therapy be concerned with the commercial value of its products?

Aides, directors and interested medical men are invited to write to the editors expressing their opinions on this important question. In a recent communication received by the department the expression, "the fallacy of putting occupational therapy on a commercial basis" was used. If there were no differences of opinion, occupational therapy would be far less alive and stimulating.

Some of the leaders in O. T. have always stood out frankly and firmly for a modified commercialism. "The more valuable the product, the better the therapeutic effect" has been one of their articles by faith. Like most catch phrases, it expresses only a partial truth. Probably no experienced O. T. worker is so far gone in commercialism as to assume that a poor piece of work may not represent a veritable triumph for aide and patient, even though the money value is nil. But is it not up to the occupational directors to put enough thought and skill into the preparation of their problems, so that a valueless product will be the rare exception? Is it not true that given the right materials and a proper supervision, the therapeutic work of the handicapped may almost always be good enough to command a legitimate market? May it not be that a really valueless product reflects upon the skill of the aide rather than upon the patient?

Occupational therapy may easily lose its identity and become an economic or commercial proposition, if we make good work the chief concern. The first insistence must be that the patient shall benefit physically and mentally by his work. Our efforts in O. T. would be wholly justified if no product of commercial value ever resulted from the labors of our patients, but if we can add the encouragement, the delight of a small money return, shall we not be wholly justified? Can we afford to ignore human nature that wants something tangible, more tangible even than returning efficiency as a reward for labor accomplished? Is not the laborer "worthy of his hire" even if he happens to be an invalid? We have, no doubt, a right to spoil an unlimited quantity of good material if by doing so we may even in the slightest degree improve the courage and effectiveness of our patients. But have we a moral right to spoil that good material if, by a little more thought and skill on our part as teachers, we may see it converted into a legitimately salable product for the benefit of the patient and for the support of the system?

These are interesting and important questions. Serve the good cause by reporting instances where the commercial spirit has interfered with the best therapeutic results. Report to us, also, cases in which the money value of O. T. products has actually helped the patient to make progress toward recovery.

MASSACHUSETTS STATISTICS

A recent bulletin of the Massachusetts Society for Mental Hygiene makes the startling statement that "one out of ten of all adults in Massachusetts will either die in state institutions for the mentally sick or be admitted or discharged from such an institution before he dies." It further states that "on November 1, 1921, there were, under care in state hospitals for the insane and feeble-minded, nearly 19,377 patients and that for the fiscal year insanity, feeble-mindedness and mental disorder took toll of $7,000,000 of taxpayers' money, nearly one-fifth of the state expenditure ($7,187,022.22.)"

"There is one mentally sick person under institutional care for every 248 of the estimated population of Massachusetts," continues the report. "There are in America as many mentally sick patients under institutional care as there are patients in all other hospitals (medical, surgical, etc.) put together."

In terms of occupational therapy and of directed household, farm and shop activities, it would seem that there is plenty of work ahead, for we may now say without fear of contradiction that nearly every one of these mentally sick patients needs to have his activities skillfully directed, if he is not to be left to degenerate through unnecessary idleness.

NEW YORK NURSES PLAN WESTERN TOUR

The New York State Nurses' Association has arranged a thirty-day tour in connection with the convention of the American Nurses' Association in Seattle, June 26. An entire train with two diners and a baggage car will take the New York nurses and others who care to join them over a detailed itinerary covering points of interest at Banff, Lake Louise, Seattle, Portland, San Francisco, Los Angeles, Yosemite Valley, Yellowstone Park, Salt Lake City, Colorado Springs, Pike's Peak and Denver. The expenses of the trip will be covered at one flat rate so that the nurses can figure before they leave the exact cost of the journey from New York until their return, including hotel accommodations, meals, fares, special trips, etc. Mrs. Julia Kline, 546 Rugby Road, Brooklyn, is chairman of the transportation of the New York association and she will furnish full particulars concerning the trip to any nurses interested.

DISPENSARIES AND OUT-PATIENT DEPARTMENTS

Conducted by MICHAEL M. DAVIS, JR., Ph.D., Executive Secretary Committee on Dispensary Development, United Hospital Fund of New York, and Chief, Service Bureau on Dispensaries and Community Relations of Hospitals, American Hospital Association, 15 W. 43rd Street, New York
and by ALEC N. THOMSON, M.D., Director of Medical Activities, American Social Hygiene Association 370 Seventh Avenue, New York

MANAGEMENT OF A VENEREAL DISEASE CLINIC

By ALEC N. THOMSON, M. D., Director of Medical Services, American Social Hygiene Association, New York.

IN A recent survey of a city of 800,000 population it was estimated that 35,000 require treatment for gonorrhea and syphilis each year, or 4 per cent of the population. If we assume that 25 per cent of this number is unable to pay a private physician's fees, we arrive at the conclusion that 1 per cent of the population needs clinical facilities. This seems to indicate that in cities of less than 50,000 population it is difficult to manage a clinic efficiently and economically, and that in cities of less than 200,000 population such an undertaking would be unwise except in combination with other community health work.

Having determined the ability to support a clinic, the next important step is the location of the clinic. The location is important because of its affect upon attendance, upon class of service and upon economic operation. To draw the largest number, a clinic should be centrally located in order to be equally accessible to all who desire its services. A venereal disease clinic might be located in an office building; might be an isolated out-patient activity of a hospital or dispensary; might be one of the the medical activities of a health center. But to meet all conditions ideally it should be one of the clinics of a general dispensary, centrally located if possible. In this type of clinic the cause for the patient's attendance is least obvious to the public; costs are reduced to a minimum because some of the overhead is shared by other departments and purchases can be made in greater quantity; consultation, morale, interest and coöperation in the work are at their best. The other locations, from the health center to the office building, have some of these advantages in respectively less degree, leaving the office building or isolated clinic the least desirable and advantageous.

General Dispensary Waiting Room Best

The amount of space required for the efficient organization of a clinic depends mainly upon the volume of work to be done and the personnel to be accommodated. Other factors may enter into the consideration of the total floor space and its subdivision according to the location of the clinic; such, for instance, as space for social worker and clerical staff, or space for waiting room, which might be part of the general administrative arrangement of a dispensary. On the whole, however, consideration should be given to space for waiting room, history room, examination room and treatment room.

A plan of a venereal disease clinic that can readily be adapted to existing buildings.

The waiting room is, of course, best taken care of in the waiting space of the general dispensary in which the patient is not classified according to his disease. Where this is not possible and a separate waiting room is necessary, this space need not be large. The number of waiting patients should never show much accumulation if the clinic is efficiently managed. This means prompt attendance at clinic and steady and devoted application to the work on the part of the personnel.

In a small clinic the history taking and examining may be combined in one room, as comparatively few new

patients are admitted in any one clinic session. Patients disrobe for a full physical examination. In a larger clinic, therefore, it is necessary to have a separate history room and examining room in order to maintain privacy and quiet.

The space required in the treatment room depends upon the number of patients to be taken care of and the time allowed for technical procedures. Many clinics attempt to run a large number of patients during a short period of time in improperly arranged quarters.

In planning equipment, economy of space and convenience of the personnel should be considered. Space can often be saved by careful placement of apparatus and avoidance of duplication. Every room does not necessarily have to have a sterilizer, although the procedures carried out in the room may require the occasional use of one. The equipment for irrigation work in the treatment of gonorrhea in the male may, for instance, be such as to do away with the ordinary lavatory for washing up at a considerable saving of space and money.

The accompanying cut of floor plan is illustrative of simple arrangements of minimum space for minimum personnel, conducive to fluidity of traffic and maximum efficiency. Under such conditions it should be possible to handle an average of nine patients per hour per unit of personnel. The advantages of both of these floor plans is that the patient makes the round of the clinic without doubling on his tracks. The confusion and disorder of busy days are thus reduced to a minimum.

SEX EDUCATION AND VENEREAL DISEASE

Does sex education begin too late to be of real service in safeguarding young people against venereal disease, is the question raised in a recent report issued by the United States Public Health Service. The authors of the article, Dr. C. C. Pierce, assistant surgeon general, and Edgar Sydenstricker, statistician, are careful to explain that the statistics available as to the ages at which the disease is most often contracted, are as yet too scanty to do more than suggest the question, and cannot answer it.

These statistics, so far as they go, however, suggest that children, especially those of the class which is ordinarily considered most likely to be infected, leave school long before the age at which sex education in regard to the twin diseases is commonly given. The earliest incidence as shown by these records appears in men at the age of fifteen and shoots swiftly upward at sixteen, reaching maxima at nineteen and twenty-three. After twenty-three it drops as rapidly as it rose. Attention is called to the apparent significance of the fact that the years between sixteen and twenty-three are those between the usual ending of school, and the beginning of married life. For the women, the incidence of the disease ranges about two years earlier than in men.

The Public Health Service is now engaged in assembling and tabulating a very much larger number of cases which will probably give much more definite results.

DOCTOR'S SOCIAL ATTITUDE IN VENEREAL DISEASE CLINIC*

Perhaps the one factor on which more than any other hinges the success or failure of the venereal disease clinic is its man-power. Advances in urology and syphilology have been so rapid in the last decade that only the physician who has kept in stride with progress is competent to grace the staff of the clinic.. But aside from the scientific qualifications of members of the staff, there is another consideration, the importance of which is too frequently overlooked; namely: The personal or social attitude of the doctor toward the patient. Many a physician becomes so engrossed in the treatment of the patient's disease that he is likely to overlook the treatment of the patient himself. Every patient is a "case," and as such should be critically, impersonally, and objectively studied with the same interest as is employed by the biologist in examining a newly-discovered beetle. Every patient is also a tangled bundle of opinions, prejudices, sensibilities, likes and dislikes, which bundle no psychologist has yet succeeded in unraveling. He resents being treated as a mere specimen. He has come specifically to seek physical relief, but desires also human sympathy and understanding. He craves the good will and favorable opinion of the doctor and offers his friendship in return, for in the doctor he has found one who has a real understanding of his physical distress or difficulty. He is entitled to all the courtesy and consideration which a physician would give his best private patients.

*Treatment of the Venereal Disease Patient, by H. E. Kleinschmidt, M.D.

DELAWARE OUTLINES PLAN FOR STATE CARE OF MENTAL DEFECTIVES

More and more the different states are beginning to realize the perils that result from neglecting the complications that mental diseases introduce into the problems of delinquency, crime, dependency, and other social ills, and are taking steps looking to the cure and to the prevention of these diseases. They are stressing preventive work among children particularly, both because these are the most easily accessible and most easily studied, and even more because, as is now thoroughly understood, they are likely to suffer from many small and easily remediable health defects which, if neglected, may very probably heavily handicap them through life.

Delaware is the latest state to take action. As a result of a two year survey in Sussex County, made by the United States Public Health Service in collaboration with the Children's Bureau, the state officials engaged in the care of mental defectives, have become intensely interested in the establishment of a bureau of mental hygiene in connection with the state board of charities to deal with the subject.

At the request of the secretary of the board, the representative of the Public Health Service who had directed the survey was sent to Delaware to outline a program for the institutional care and community supervision of the mental defectives resident in the state.

First steps in carrying out this program have been taken by the appropriation by the legislature of $60,000 for improving the care and treatment of the mental patients in the state hospital at Fahrnhurst. A training school for nurses specializing in neuropsychiatric diseases will be opened; reconstruction aides in both occupational and physicotherapy will be engaged; and additional physicians will be employed.

MISS FITZGERALD TO MANILA

Miss Alice Fitzgerald has been appointed a special member of the staff of the International Health Board of the Rockefeller Foundation to serve as consultant in nursing in the Philippine Islands in connection with a program of cooperation recently entered into by the Foundation and the government of the Islands. Miss Fitzgerald will sail for Manila early this month.

Meetings, Conventions and Conferences

AMERICAN CONFERENCE ON HOSPITAL SERVICE HEARS AGGRESSIVE PROGRAM

WHAT the 150 physicians and hospital administrators in attendance characterized as the most aggressive and far-seeing program of papers yet presented at a session of the American Conference on Hospital Service was heard on Friday, March 10, in Chicago when that body met in conjunction with the annual Congress on Medical Education, Licensure, Public Health and Hospitals. The hospital program consumed the final session of the five-day congress held in the Congress Hotel. On the preceding evening the business meeting of the American Conference on Hospital Service took place.

Three salient themes occupied the hospital workers. They were: training courses for hospital superintendents, discussion of which was provoked by an able paper by Dr. A. C. Bachmeyer, superintendent of the Cincinnati General Hospital; standardization principles and problems, treated by that pioneer in the field, John G. Bowman, chancellor of the University of Pittsburgh; and the hospital dispensary, the subject of the entire afternoon's program discussed from three distinct viewpoints by Dr. William S. Thayer, clinical professor of medicine, Johns Hopkins University; Michael M. Davis Jr., chief of the Service Bureau on Dispensaries and the Community Relations of Hospitals of the American Hospital Association; and John E. Ransom, superintendent of Michael Reese, Dispensary, Chicago.

Dr. Frank Billings, president of the American Conference on Hospital Service since its establishment and reelected to that office for the ensuing year, presided.

Three Principles in Standardization

In viewing the standardization program of hospitals, Chancellor John G. Bowman in his address saw three fundamental principles: (1) The aim of hospital standardization must be within the purposes the hospitals have consciously put for themselves; (2) the program must be flexible; (3) the individual must be held accountable for his action or his failure to act.

"Hospital standardization is an educative process," declared Chancellor Bowman, "and as such it is all one with a moral service. It is at the same time a practical and a scientific service.

"The hospital program must be flexible. It cannot be formulated into a set of rules but should be a mark for future attainment. First may come rules but rules must evolve into principles and principles give way to understanding. The objective toward which the hospital strives must be clear, radiant. Everybody in the institution must feel not only intellectually but emotionally the ideals and purposes of the hospital. Ideals must dominate routine. In flexibility only lies the incentive for happiness and success.

"Responsibility is the very heart of the program of hospital betterment. In twenty-five years the most significant thing in medical service has been the fact that the hospital has assumed some real responsibility to the public for the care of its patients. It has developed from a boarding house into an institution with character and responsibility. Workmen's compensation laws have stimulated among hospitals the sense of responsibility. Again, the advance in the science of medicine has created a wide and natural discrepancy between the skill of doctors. As a consequence the individual desires some check on his own choice of physician and the hospital must assume this responsibility."

Chancellor Bowman paid tribute to Dr. Billings in his address attributing the success of the American Conference on Hospital Service to the stabilizing influence of its president. At the establishment of the Conference he believed the program was not aggressive, but rather negative, said the speaker, but the organization has already advanced far beyond his anticipation.

Fears "Closed Hospital"

In the discussion of standardization which succeeded Chancellor Bowman's paper, Dr. Malcolm L. Harris, president of the Illinois State Association on Hospital Standardization, aroused the convention by his criticism of the standardization program. Dr. Harris argued that the program was leading toward the "closed hospital" and such an "audacious policy must end disastrously."

"That medical men should be represented on every board of trustees," said Dr. Harris, "is absolutely essential. I am of the opinion that the majority of the board should be medical men. The medical profession should resent this growing idea that the patient belongs to the hospital."

Among those who challenged Dr. Harris' statement was Dr. Herman Smith of Michael Reese Hospital who declared that Dr. Harris' opinions did not represent the ideas of the majority of hospital workers in Illinois.

Dr. George W. Swift of Seattle, Wash. was first to attack the statement of the president of the Illinois association.

"The presence of a doctor on a hospital board of trustees is fatal," said Dr. Swift, who heads the Washington

State Association on Hospital Standardization. "We have had to request physicians to get off our boards of trustees. They are always older men with life-tenure jobs and they block standardization."

The Seattle doctor made a plea for a lowering of the intern requirements of the standardization program so as to enable more western hospitals to qualify.

Hospitals Have Three Moral Obligations

Rev. Fr. Charles B. Moulinier, president of the Catholic Hospital Association, followed Dr. Harris is a discussion of standardization principles. He declared that the medical profession had realized that its fundamental obligation was to improve the type of men within its ranks and had accomplished this through raising educational standards. The hospital, he said, has a great moral responsibility made up of three moral responsibilities, that of the medical, nursing and hospital professions. The public has a right to expect 100 per cent up-to-date scientific institutional care and that institution has failed when one member of its staff makes an error.

The difficulty in applying definite standards in rural hospitals was stressed in a voluntary discussion by Dr. Paul W. Goldsbury of Deerfield, Mass. In the city hospital, said Dr. Goldsbury, one is impressed by the machinery; in the rural hospital it is the personality of the staff which impresses one. The smaller the hospital the more difficult it is to have standards, he declared, but the more necessary it is to have ideals.

Dr. Arthur C. Bachmeyer's paper on "The Qualifications and Training of Hospital Superintendent's" printed on page 338 of this issue was one of the outstanding contributions to the program and investigation on that subject.

Statistics showing the large and growing preponderance of small hospitals were quoted and the indefinite source of supply for executives in this specialized field of endeavor was made plain.

"Drift" Into Hospital Administration

"Medical men, nurses and laymen in increasing numbers drift into administrative work," said Dr. Bachmeyer. "Because of this 'drifting' and because in many instances boards of trustees are not cognizant of the proper functions of a superintendent, many institutions are not playing their proper role in the life of the community they seek to serve and are not being properly and efficiently administered.

"If our colleges can prepare men for other professional and technical vocations they certainly should be able to prepare men and women for administrative positions in our hospitals. The aim of such a course should be to train men and women at maturity of mind, broad vision, good perspective, executive ability, initiative, ability to coordinate the work of an intricate organization and to correlate the hospital with other agencies in the community. The training should primarily give the student inspiration and viewpoint. He should be led to think of the hospital in terms of its relation to the community, to the medical and nursing professions and to society in general.

"Because of the limited remuneration now being paid the majority of superintendents and because of the varied type and size of institutions, the course should be restricted to a rather short period of time, not more than twelve or at most eighteen consecutive months. Although medical education is a distinct value, matriculation should not be limited to graduates in medicine only. The matriculant should possess a general knowledge of the business, social and economic world, a broad general background, and training and experience equivalent to a college degree."

The following subjects were suggested by Dr. Bachmeyer as a part of the course: history of the hospital and its various services, sanitation and hygiene, biology, sociology, jurisprudence, business science, domestic science, building and power plant operation, and maintenance and administration. After a period of twelve or eighteen months in intensive didactic and practical instruction, the student should spend further time in an apprenticeship, not without financial remuneration.

Urges Research in Hospital Administration

Edwin R. Embree, secretary of the Rockefeller Foundation, a committee from which is surveying the opportunity of training hospital executives, led the discussion which followed the Bachmeyer paper. Mr. Embree declared that schools must not only teach students in hospital administration the known facts about hospital management but more important they should extend the known science. To pass on the known knowledge only would be quite sterile, he declared. Field studies must be carried on in such schools to keep the instructors alive. The difficulty, as he sees it, in fixing a curriculum lies in the fact that no one knows what the hospital will be ten years hence.

The technique employed in the study of hospital administration and qualifications for it was described by Dr. Willard C. Rappleye, chairman of the Committee on Survey of Opportunity of Training of Hospital Executives of the Rockefeller Foundation.

"The performance of a hospital," said Dr. Rappleye, "is judged on the adequacy with which it performs its three basic functions. These are the adequate care of patients, education of personnel, patients and the public, and investigation or research."

Many of the mistakes and much of the ignorance which has resulted in the failure of institutions will be prevented when proper instruction in hospital administration is given to properly qualified men, according to Dr. A. R. Warner, executive secretary of the American Hospital Association, in his part of the discussion. The function of such training will be to do away with the mistakes which most hospital executives of today made in their early years in administration, he said.

In the general discussion of the topic which followed Dr. C. C. Burlingame of the Presbyterian Hospital, New York, declared that before courses in training hospital executives could be provided, the question of what part the superintendent is to play in hospital organization must be defined. Is the superintendent to be the secretary of the board of trustees, a guide to conduct committees about the hospital or the head of the institution in every sense of the word are the questions Dr. Burlingame put. His idea of the superintendent's duties is that he be the coordinating agent between the medical, financial and all other interests.

Sees Danger in Overhospitalization

Dr. Billings in a closing statement concluding the morning section of the program, which dealt directly with hospitals, declared that in his opinion seventy-five per cent of the people who require medical and surgical care can acquire it outside the hospital.

"We should not too fully hospitalize the public," was Dr. Billings' contention. "The welfare of the United States depends upon the maintenance of the family home. The family home is dependent upon the domiciliary visitation of a doctor."

Miss Donelda R. Hamlin, director of the Hospital Lib-

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rary and Service Bureau, gave a report of the first year's work of that service which convention officials expressed as most gratifying.

The dispensary, topic of the afternoon session, was treated from the standpoints of its function in medical education and as a diagnostic clinic, its relationship to the public and to the medical profession and its relationship to the hospital.

Dr. William S. Thayer in speaking of the dispensary as a factor in medical education discussed the subject from four angles: the value of the dispensary to senior medical students; its value as an agency to keep in touch with the ward patient; its importance as a case unit index; and its value as a center of a department of industrial medicine.

"Few schools use the dispensary for senior students," said Dr. Thayer. "While it has a great value to beginners in history taking and has a value for special clinics, its greatest worth is that it provides for the senior medical student the same field which ordinary medical practice offers. In the dispensary the student can familiarize himself with the anatomy, the physiology and psychology of minor as well as grave diseases. From the standpoint of medical education it offers much."

The diagnostic clinic, according to Dr. Thayer, has a distinct value to the physician in that it offers him assistance through expert diagnosis. Such clinics have a real duty toward doctor and public. When diagnosis is undertaken for a doctor, Dr. Thayer believes, the clinic should make it less time-taking than regular dispensary service. By appointment the clinic should give a limited number of consultations for diagnosis during the day at modern rates.

Advertising in connection with the diagnostic clinic is in very bad taste, Dr. Thayer asserts. There is no sounder reason why a group of physicians conducting a clinic should advertise than for a single doctor. Nor is there any greater reason, as he sees it, for the dispensary in a general hospital to advertise than for the hospital proper.

Michael M. Davis Jr. discussed the dispensary from the viewpoint of its relationship to the public and to the medical profession of the community.

"So astonishing has been the rate of growth of the dispensary," declared Mr. Davis, "that it must be no longer regarded as a charity but as a form of medical practice. The hospital and dispensary are a unit; their medical staff should be one, and their administrative staff one.

"In the dispensary the medical profession must have complete professional control of professional work and a group of citizens must have complete control of the policy of the institution. These are fundamental for the success and development of the dispensary.

"The dispensary must deal in treatment as well as in diagnosis. Its goal must be larger service to more people. It will take a long time, but eventually the dispensary must serve a much wider range of persons financially."

In the ideal dispensary that Mr. Davis presented there should be one doctor responsible for each patient. There should be no exploitation of doctors. The dispensary would be open to all physicians of the community as is the hospital. There would be a personal relationship between doctor and patient.

John E. Ransom in speaking on the relation of the dispensary to the hospital, divided his topic into four parts, staff, service, financial and community relationships.

"The out-patient department requires advocates who actually sit in the seats of the mighty," he declared. "It needs a live committee of its own members to function with the trustees. Ideally there should be one stamp of quality applicable to the hospital as a whole.

"The dispensary must not be the staff man's purgatory. The hospital must sell its out-patient department to its staff; if it can do that it can buy back for the dispensary all it needs of their services. The out-patient department should furnish material for the future major staff so that when vacancies arise the dispensary doctor may know that he has some chance of professional advancement.

"So frequently the dispensary is located in the basement that it must really be the very foundation of the hospital. From the standpoint of its real service to the hospital the great need is for better articulation between the out-patient department and ward.

"More money is needed for the dispensary; its value is unknown to the giving public. It has been said that the out-patient department is the Cinderella of the hospital household; in such case the prince's ball is the meeting of the budget committee and the fairy godmother is not to be found. Publicity should be given the dispensary in terms which its clientele can understand."

Dr. George Dock, professor of medicine, Washington University, St. Louis, in his discussion added to Dr. Thayer's claim of the value of the dispensary in medical education by citing its training in speed. The student who learns entirely within the hospital is apt to go into practice a slow worker, he declared, while training in the out-patient department demands that he be quick.

Dr. Arthur Dean Bevan, professor of surgery, Rush Medical College, Chicago, took issue with Dr. Thayer in that the student should be put in the dispensary the fourth year. He believes the third year should be spent in the dispensary and the fourth in the hospital. The general practitioner, he agreed with Dr. Billings, should be the overshadowing figure in medical practice. He can take care of from eighty to ninety per cent of all cases much better than any group of specialists in the hospital or dispensary, he believes.

"Medicine has dismembered the patient's body by specialization, said Miss Ida M. Cannon, chief of the social service department at Massachusetts General Hospital in Boston, in a brief discussion, "and it is up to the social worker to be something of a correlating factor. In the dispensary it is impossible for the doctor's personality to extend to the patient, and it is vital for the purpose of diagnosis and treatment that something of the patient's family and industrial history be known.

Dr. George S. Shambaugh, professor of oto-larynology at Rush Medical College, Chicago, explained before the convention his system of placing postgraduate students in his department to perform routine duties. By this method he declares the patients are getting proper care, the regular attendings are finding their work, minus the routine, more interesting, and for a small number of men the problem of the proper training for practice has been solved.

Alfred C. Meyer, president of Michael Reese Hospital, Chicago, explained in his discussion why he does not believe in the complete unification of the in- and out-patient service. The ideal dispensary of the future, in his opinion, will in addition to the requisites outlined by Dr. Thayer be aggressive and have a more militant social service department. It will not content itself with handling problems that arises within it but will go out into the community. The social service department will deal not only with the patient but will attempt to remedy the maladjustments in the patient's family which hinder his convalescence.

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AMERICAN CONFERENCE ON HOSPITAL SERVICE TO SPONSOR A NATIONAL HOSPITAL WEEK

ACTION looking toward the inauguration of a National Hospital Week and toward the formulation of a definite program of constructive work for the Conference were the outstanding features of the annual meeting of the American Conference on Hospital Service held at Chicago, Ill., on the evening of March 9, 1922.

"During the last five or six years," said Dr. Frank Billings in his opening remarks, "an earnest effort has been made by several national organizations to rate hospitals upon standard lines in the promotion of better service to the sick and injured. This movement has emphasized the manifold ramifications which the hospital plays in the social and economic life of the public. The men and women who have taken leadership in this national program of hospital betterment have long had in mind the desirability of organizing a thoroughly well planned effort to educate the public upon the benefits which the hospital affords the community and the need of a larger and more intelligent support of the hospital by the public.

"It is believed by those best qualified to know that the education of the public and an aroused interest of the community in the support and promotion of the hospitals of the country will be secured and maintained throughout the year by the establishment and observance of an annual Hospital Week.

Compliments Hospital Day Committee

"It is believed that the hospitals, particularly those which lack publicity of their own, will welcome a plan which is nationwide to promote public interest in existing hospitals and in the organization of new hospital projects in communities where they are much needed. This suggestion of an annual National Hospital Week affords a reasonable promise of productive results in view of the great interest which was so readily aroused in the observance of National Hospital Day on May 12, 1921, the anniversary of the birth of Florence Nightingale. The National Hospital Day Committee deserves commensurate credit for the establishment of National Hospital Day; its activities have served a very useful purpose as an initial step in the right direction.

"Inasmuch as the hospital field is so large, it naturally occurs to one that there is need of a thoroughly organized effort to promote the education of the public which will be sponsored by all of the national organizations which are interested in the various subjects included in the hospital field. Therefore, since the American Conference on Hospital Service was organized as a clearing house for these associations, it is believed that the proposed work of organizations in the establishment of an annual Hospital Week logically falls within the scope of its activities.

Suggested Outline of Activities

"The week will be devoted to the promulgation of publicity propaganda, local, state and national, in behalf of the hospitals and dispensaries of the country. The purpose will be: To develop a better understanding between the hospital and the community in regard to its problems and its work; to create a sense of responsibility in the public mind which will lead to constructive criticism, to pride of achievement and to the active support of the hospital as an economic asset; to promote a week of open house to the public in the endeavor to establish a sort of family intimacy and a discussion of the problems, successes, accomplishments and needs of the hospital; to give account to the public of its stewardship for the funds received in trust and on the record made to justify the request for additional aid and support; to feature the department of nursing of the hospital by including in the National Hospital Week, May 12, the anniversary of the birthday of Florence Nightingale. This will recognize and emphasize the good work already accomplished and will preserve and continue the annual Hospital Day.

"During Hospital Week, Sunday will be properly observed in all churches, disregardful of creed or denomination, by a service and address devoted to the care and treatment of the sick and injured and to the activities of the hospital in relation to community health and welfare. Sunday evening church service might probably be conducted by hospital officials including members of the staff, public health officials and other qualified individuals. Even Sunday school service could be devoted to the interests of the sick and injured, especially among children.

"It is suggested that the graduation exercises of training schools for nurses may fall upon the anniversary of Florence Nightingale's birth and by the use of this day and the occasion call public attention to the work and accomplishments of nursing service and the promotion of nursing education.

Special Days for Various Departments

"To select days in the week for the annual observance and demonstration of the activities of the various departments of the hospital and dispensary is also a good plan; for example, on one day demonstrations and special reports of the activities of the departments of social service, of diseases of children, infant and child welfare; on another day a program devoted to the departments of industrial medicine and surgery, physical therapy including occupational therapy, calisthenics, Swedish movements, play and various forms of drill; and like demonstrations of other departments activities on other days of the week.

"The public interest in the demonstration of the activities of the several departments of the hospital will be aroused by securing the cooperation of groups of people including women's clubs, associations of commerce, Rotary clubs and other lay organizations.

"Throughout the week there can be conducted an active campaign for financial support. Experience shows that one annual appeal to the public is more productive than several at irregular periods of time. Furthermore, this one annual financial campaign would be strengthened by the public demonstration of the activities, accomplishments and value of the hospital service to the community. The establishment of an annual Hospital Week is offered as a suggestion to you. If you deem it worth consideration, the plan of organization, the scope and the details of the plan may be worked out by a committee composed of representatives of the Conference who are especially qualified for such work."

Acting on President Billings' suggestion a resolution was presented and adopted "that the president be authorized and instructed to appoint a special committee to establish and develop the observation of the week in which Florence Nightingale's birthday (May 12) occurs as Hospital Week, substantially as set forth in the address of the president

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JELL-O
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MAKES FOUR QUARTS
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This package makes four quarts of Jell-O. Serves forty to fifty persons according to size of portion.
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but with full power to develop, extend and modify details as necessity shall require and as opportunity shall dictate and be it further

"RESOLVED, that this committee shall be authorized to appeal for and to receive funds for this purpose, to make public announcement of Hospital Week and to suggest programs all in the name of the Conference and also to solicit cooperation in this program from the member organizations of the Conference."

Committee to Formulate Program

It was also resolved "that the president be authorized to appoint a committee of such number and persons as shall in his judgment seem wise and of which he shall act as chairman to consider all possibilities in a program of policies, of vitalization and of activities of the Conference, and be it further

"RESOLVED, that this committee shall report to the president such recommendations as it may care to make in regard to such a program for the Conference and to suggest such acts to develop ways and means and such changes in the constitution and by-laws as may appear to them necessary to carry out their recommendations and be it further

"RESOLVED, that the president be and hereby is authorized to call a special meeting of the Conference to consider this report."

The American Institute of Homeopathy was elected a constituent member of the Conference.

The following officers were elected for the ensuing year: President, Dr. Frank Billings; first vice-president, Dr. A. R. Warner; second vice-president, Miss Ida M. Cannon. The following trustees were also elected for a period of three years: Dr. A. C. Bachmeyer, Mr. John G. Bowman, Dr. John M. Dodson.

Accredited delegates present from constituent members of the Conference were: Dr. Thomas Crowder, Miss Ida M. Cannon, Miss Waters, Mrs. Mary DeGarmo Bryan, Mrs. Esther Ackerson Fisher, Dr. A. R. Warner, Dr. John M. Dodson, Dr. W. S. Thayer, Miss Mary E. Wheeler, Rev. C. B. Moulinier, Dr. David Strickler, Dr. A. C. Bachmeyer, Mr. T. B. Kidner, Capt. Charles M. DeValin, Commander O. J. Mink, Dr. McCoy, Dr. M. J. White.

CONNECTICUT ASSOCIATION MEETS

The Connecticut Hospital Association held an enthusiastic meeting in Hartford on February 25 which was attended by thirty-six hospital executives and workers.

At a business session which consumed the morning were heard the reports of the president, Dr. Harold W. Hersey; the reports of the secretary and treasurer given by Miss K. M. Prindiville; the report of the committee on by-laws; and an account of the formation of the New England Hospital Association by Dr. L. A. Sexton. Action was taken at the convention which will provide for meetings of the association quarterly, the next to be held in April.

Following a luncheon at Hotel Bond, round table discussion was participated in and those who had not previously seen the nurses' recruiting film "The Call of the Hour" were shown the motion pictures through the courtesy of Dr. John J. Brenehan.

The thirty-six in attendance represented the following hospitals: Bridgeport Hospital, Bridgeport; Day Kimball Hospital, Putnam; Danbury Hospital, Danbury; Greenwich Hospital, Greenwich; Griffin Hospital, Derby; Hartford Hospital, Hartford; Lawrence and Memorial Hospital, New London; Litchfield County Hospital, Winstead; Meriden Hospital, Meriden; New Haven Hospital, New Haven; New Britain Hospital, New Britain; Norwalk Hospital, Norwalk; St. Francis Hospital, Hartford; St. Joseph's Hospital, Willimantic; Stamford Hospital, Stamford; Waterbury Hospital, Waterbury; Yale Hospital in China.

HOSPITAL ASSOCIATION IN AUSTRALIA

New South Wales is the first Australian state to form a hospital association. The New South Wales Association is modelled after the hospital associations of Great Britain and America and was organized at a recent meeting of representatives of forty hospitals.

Hospital finance and treatment of venereal disease were the two chief topics on the two-day program at the organization meeting. Mr. Waterford of Quirindi is president of the new organization and R. J. Montgomery of the Royal Prince Alfred Hospital at Sydney was elected secretary.

In commenting on the new association the *Prince Alfred Hospital Gazette* says: "As long as the organization keeps clear of politics—which does not necessarily mean party politics—it should prove to be most valuable as an educational medium and it should also tend toward influential joint action in matters of mutual interest. In other countries such as Great Britain and America, hospital associations have existed for years with great benefit to hospital administration and sequently to the sick-poor who are treated in the hospitals."

Although the New South Wales association has just been organized, a district hospital association has been active for some time in the southern portion of the state.

In his discussion of the financial conditions of New South Wales hospitals before the convention, a representative of the Minister for Health and Motherhood admitted that their present position is acute and that some further means of raising money for hospital maintenance must be found. After a careful consideration, he declared, he had come to the conclusion that the voluntary system had not failed, and that some method of keeping that system in force must be found. The time has not yet come, he said, when the state should take over and run the hospitals. Neither did he favor the introduction of the municipal system of control.

Out of his address the conference approved the drafting of an amending act which would give hospitals power to levy a contribution on both employers and employed in a given district if it had not met its obligations in the way of providing income.

Resolutions passed at the convention requested the government to put into operation the Venereal Diseases Act and protested against the suggestion of the Minister of Health and Motherhood to allow chemists to treat venereal disease.

HARVARD COURSE IN REHABILITATION

The Harvard Graduate School of Education, Harvard University, will offer a summer course in the Rehabilitation and Re-education of Handicapped Persons July 10 to August 19 under the direction of W. I. Hamilton, industrial research secretary of the National Tuberculosis Association. The course is expected to attract occupational aides in hospitals, teachers of the handicapped, "after-care" nurses, workers in employment bureaus for the handicapped, agents of state rehabilitation services and of the Veterans' Bureau, and others interested in rehabilitation as a part of a constructive social service program.

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To stimulate jaded appetites, try delicious Hawaiian Pineapple, CALIFO BRAND, selected from the choicest fruit, picked the day it is ripe, and packed where grown.
Our direct connection with the growers of the finest fruits and vegetables enable us to keep up the quality and service CALIFO label stands for.
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Page 413
THE COAST PRODUCTS CO.
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SLICED HAWAIIAN PINEAPPLE

Hints to Hospital Superintendents

INVITING PATIENTS' SUGGESTIONS

Many hospitals invite patients' criticism and give assurance that suggestions for the betterment of service will be given consideration by means of form letters addressed by the superintendent to each incoming patient. The following mimeographed letter on the hospital stationery is delivered to each patient at the Vancouver General Hospital and may prove an interesting model for other institutions who approve the suggestion:

"To Margaret C. Goodwin,
"Ward D 106.

"It is our earnest desire to please you in the service we can render you while in the hospital. To that end we want your cooperation in helping us to do so. The management of this hospital is always anxious to know of complaints and to remedy same at once. Therefore, if you have any or if you have any suggestions regarding betterment of the service, we shall be most pleased if you will immediately notify the nurse in charge of your ward or the executive officer under whom this department comes. All suggestions and complaints will be received most courteously and the latter adjusted as satisfactorily as possible. Executive officials from the medical and nursing departments endeavor to visit all the patients daily, and will be very glad to talk to you at any time.

"Trusting that your stay in the hospital will result in your complete restoration to the best physical health, and that we as a hospital administration may serve you satisfactorily."

EDUCATING HOSPITAL TRUSTEES

Hospital superintendents should endeavor to educate their boards of trustees in institutional administration and to this end the following suggestions may be of assistance:

1. One or two of the members of the board of trustees should be appointed each month to make a complete survey of the institution and report their findings at the monthly meeting. When they make this tour of the hospital it would be better if they were unaccompanied by any official. They could consult with an official when the tour was complete.

2. Hospital trustees should be encouraged to read consistently a good hospital magazine.

3. The board of trustees should be given a monthly report of the medical work of the hospital so that they may more fully realize their responsibility as institutional custodians of the health of the community.

4. An excellent plan in use in some institutions is the practice of giving talks at the monthly board meeting on some phase of hospital work. A department head might give a brief survey of his work, or several members of the staff might give two or three minute talks. These would give the trustees a better idea of each phase of the work of the institution, and an opportunity to size up their employees as well.

5. In some hospitals today it is found most valuable to have the monthly board meeting and all committee sessions during the luncheon hour or in the evening at dinner. No doubt meetings associated with luncheons and dinners bring out a better esprit de corps.

Hospital superintendents must remember that trustees are usually not men of the medical profession, and they need an opportunity to acquire information about the institution in order that they may more intelligently deliberate on questions arising in their meetings.

INSPIRATION ON CASE RECORD SHEET

Of constant inspiration to doctor and nurse must be the lines which are found on the first sheet of each chart or case record of the Vancouver General Hospital. The cover page of each chart contains blanks for the patient's name, hospital number, ward, date of admission and doctor. Below these are two paragraphs pointing the physician and nurse to the way of close personal relationship with patients. The contents of the page are given below.

Name .....
Hospital Number .....
Ward .....
Date of Admission .....
Doctor .....

"There are two main factors which make for success in hospital work—skill and kindness. Both are important. Doctors and nurses ought to know their work and be artists in the performance of it. They should love it for its own sake, apart from any monetary gain. Besides this, they should always remember they are dealing with folks who are not only sick or wounded in body but generally much distraught in spirit; and while they minister to the stricken body they should not fail to minister to the stricken mind. The patient is often fearful, melancholy, irritable, irrational, easily perturbed, very sensible to pain or slight. Doctors, nurses and students who are tactful and able to handle with grace patients emotionally unstable, wilful or unreasonable, and at the same time render skilful attention to the sick body, have entered the Promised Land of their profession. Such are to be congratulated; and the hospital which has the greatest number of these 'top-notch' people around is the hospital to which the people will flock for help when they are sick.

"The best publicity a hospital can secure and the most important factor in its success as an institution is to send all its patients home well pleased with the treatment they have received when ill. The hospital with its equipment and personnel is to assist the doctor in every possible way to bring the patient back to health in the quickest and most comfortable manner, and thus develop in the patient an appreciation of such service. To accomplish this there must be a close personal touch developed between staff and patient. This can be obtained by a keen appreciation and anticipation of what the patient needs and prompt attention to all these, whether large or small. At all times the question uppermost in the minds of those who serve should be: "Are all my patients satisfied?" After all, the service we can render our patients is the acid test of how we are discharging the duties and responsibilities falling on us in this work."

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HOSPITAL GOWNS

"Are you from Missouri?" say WE—
"You bet we are! You have to show US," say YOU—
"Atta Boy! WE'LL show you," say WE.
"What?" say YOU.
"We'll SHOW you, we'll PROVE to you that

OUR

Surgeons' Gowns, Patients' Bed Gowns, and Nurses' Gowns

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Equal of Any, The Superior of Many

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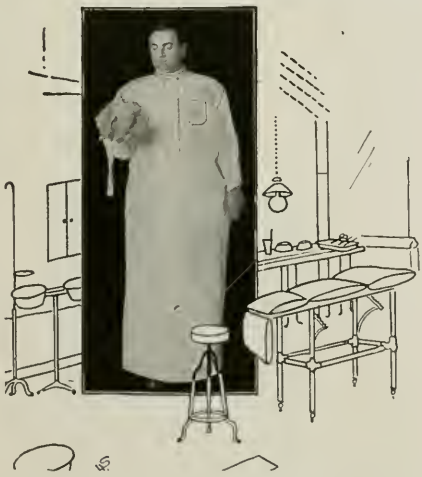

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QUERIES AND ANSWERS

COST OF COMMUNITY HOSPITAL

To the Editor of THE MODERN HOSPITAL:

Under conditions now prevailing what would be the cost of a thirty-bed community hospital?

HOSPITAL ASSOCIATION.

"Thirty-bed community hospital" is a rather vague term. One community may wish to place most of its beds in private rooms, while to another open wards may commend themselves. Most communities, I take it, prefer a mixture of single rooms and ward service. Let us turn to a concrete example of a small country or community hospital now under way, analyze its contents, and estimate its cost. Variations from the program given can then be worked out to suit your own case.

The plan under consideration provides accommodations for 43 beds, divided as follows:

Single rooms	17 beds
Women's ward (individual cubicles)	8 beds
Men's ward (individual cubicles)	8 beds
Maternity ward (individual cubicles)	6 beds
Children's ward (individual cubicles)	4 beds
(Nursery beds not separately counted).	

Of the seventeen single rooms two have private baths and four private toilets. Part of the domestic and nursing staff is to be accommodated outside of the hospital. Within the hospital building the following accommodations have been provided:

Superintendent, bedroom and bath.
Dietitian, room.
Intern, bedroom and bath.
Seven single rooms for nurses (toilets and baths).
Nurses' sitting room and dining room.
Operating room, sterilizing room, scrub-up room, doctors' dressing room and anesthesia room.
Delivery room.
Clinical laboratory.
X-ray room, dark room and small dressing room.
Dental room.
Separate porches for ward and private patients.
Ward and private patients' services on separate floors, and for each group charting space, medicine closet and sink, pantry, utility room, linen room and supply closet.
Locker room for graduate nurses.
Four bedrooms for male help (capacity eight beds).
Waiting room and treatment room for out-patients.
Clinical record room.
Office and reception room.
Kitchen, storage for kitchen supplies, helps' dining room.
Storage for miscellaneous supplies.
Laundry with separate assorting and clean linen rooms.
Boiler room (but no lighting or power plant).

The building measures 397,000 cubic feet. As to the cost of fireproof construction, recent estimates vary from 46 to 48 cents per cubic foot in the Middle West, to from 60 to 65 cents in the vicinity of New York. Where funds are limited, one might consider the substitution of semi-fireproof or non-fireproof construction, *but only in case it is possible to place all the patients on the ground floor.*

The hospital described above is deficient in accommodations for out-patients, and has no adequate arrangement for social service; by the freer use of ward beds and a reduction in the number of private rooms, these desirable features could be supplied without increasing the size of the building. The absence of dormitory accommodations for female servants will be noted. In the given instance it is proposed to employ women living in the neighborhood.

The same general plan, adapted to thirty beds, would require approximately 320,000 cubic feet. For sixty beds it would be necessary to increase the cubic contents to about 540,000 cubic feet.

If one keeps in mind all of the desiderata of an ideal community hospital, it is difficult to use much less than 10,000 cubic feet per bed. Hospitals of smaller relative content can be and frequently have been built, but only by sacrificing desirable features of service or sanitation.—S. S. Goldwater, M.D.

TRAINING FOR DIETETICS

To the Editor of THE MODERN HOSPITAL:

Would you kindly tell me how a dietitian gets her training, how long it takes to qualify for a position and what salary hospitals pay for this line of work?

A READER.

A dietitian gets her training first by obtaining a good foundation in home economics. This is followed by a few months of training as student dietitian in some hospital having a good dietary department. It will take not less than two years of college training and four months of hospital training to qualify for a position; four years of college and six months of hospital training are better.

From some figures that were collected by THE MODERN HOSPITAL last year, it was found that the average hospital dietitian was then receiving about $1,200 a year, in addition to her maintenance. The salaries vary above and below this figure depending very largely upon the size of the institution.

DISINFECTING DISHES

To the Editor of THE MODERN HOSPITAL:

Can you give us any information as to the best way of disinfecting dishes used by typhoid patients in a small fifty bed hospital? Also, any information as to the best kind of dishes for use in typhoid rooms would be very much appreciated. PRINCIPAL OF TRAINING SCHOOL.

For disinfecting dishes used by typhoid patient have a utensil sterilizer put in the diet kitchen so that dishes may be taken directly from the patients, put into the sterilizer and swilled in an open can, which should be kept beside the sterilizer. Then boil them for ten or fifteen minutes, after which they may be washed in the diet kitchen sink. After collecting the dishes used by typhoid patients the nurse should wash her hands before doing anything else.

The dishes should be of heavy earthenware and sterilizing does not break them very often. Glasses, however, will break, and we have found that the cheaper grade breaks no oftener than the higher grade of glassware—D. L. Richardson, M.D.

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Book Reviews and Current Hospital Literature

A FORM OF RECORD FOR HOSPITAL SOCIAL WORK

By GERTRUDE FARMER, Director, Social Service Department, Boston City Hospital[1].

Miss Gertrude Farmer in her recent book, "A Form of Record for Hospital Social Work," has made an unique contribution by adapting a form of social record to meet hospital needs. A departure is made from the chronological type of record now in common usage and substituted is a summary form which reports results rather than processes in diagnosis and treatment. Case technique is clarified by thought-provoking captions which necessitate an interpretation of the social needs of the patient, as based on his medical diagnosis. The economy of this form of record lies in the minimum of time and space necessary in typing and filing. With elimination of detail its brevity makes the record content readily available for the use of busy physicians, workers and outside agencies. Mrs. Ada Sheffield who indorses this book, in the preface states: "A record is treated for the important thing it is, namely, it is the worker's thinking objectified."

Miss Farmer has so ably expressed the adaptability of this form of record for hospital use that workers facing problems in relation to case histories would find numerous and invaluable suggestions in this book. The concluding chapter contains illustrative records which give practical insight into Miss Farmer's method of record keeping.

NOSTRUMS AND QUACKERY

Prepared, compiled and edited by Arthur J. Cramp, M.D., Director of the Propaganda Department and Bureau of Investigation of *The Journal of the American Medical Association;* reprinted with or without modifications from *The Journal of the American Medical Association.* Vol. II.[2]

Far more replete than the original volume of a decade ago is "Nostrums and Quackery," Vol. II, from the American Medical Association Press. The compiler has selected from current material more than 800 pages of evidence against the "patent medicine" and quackery evil, part of which is reprinted from articles in the A. M. A. Journal in its determined campaign against fraudulent activities. The new work is significant for its thoroughness of treatment; its scope is broad and its conclusions unescapable. Illustrations tell the story in many cases. The book is divided for convenience of treatment and of perusal into exposés of alcohol, tobacco and drug habit cures, consumption cures, cosmetic nostrums, cough medicines, deafness cures, epilepsy cures, female weakness cures, nostrums for kidney disease and diabetes, medical institutes, medical mail order concerns, men's specialists, mineral waters, miscellaneous nostrums and specialists, obesity cures, drugless quackery, rheumatism cures, tonics, bitters and miscellany. The material is handled in a thoroughly scientific manner, allowing the reader to place his own interpretation on the facts presented.

EPHRAIM McDOWELL

Ephraim McDowell, Father of Ovariotomy and Founder of Abdominal Surgery, with an appendix on Jane Todd Crawford. By August Schachner, M.D., F.A.C.S., Louisville, Ky.; octavo volume of about 350 pages; attractively printed and profusely illustrated with plates in double tone.[3]

Ephraim McDowell in his crude and wild but picturesque setting, amid the daring and the coarseness of the frontier, as a country doctor practicing his profession without a diploma, singly and alone, through his ovariotomy added more to the art of surgery during the short space of his career than all of the rest of the surgical world combined added in the same number of years and during the same period.

The struggle which attended the adoption of ovariotomy and which lasted for fully a half a century is vividly set forth, and the persecutions to which the earlier defenders were subjected is of the keenest interest. It was not until 1861, or more than a half century after McDowell's first ovariotomy, before a favorable word was said for it by a French professor in a French university. In England the situation was very little better, as it was not until a third of a century thereafter that a London hospital could boast of a successful ovariotomy.

A fascinating review of the more important events of that interesting period and place in which he practiced is interwoven throughout the narrative. It is a review of the times and contains thumb-nail sketches of persons who directly or indirectly became associated with the man and his work during his own period and the period that followed.

The importance of the frontier in medicine and in the development of our national characteristics are strikingly portrayed.

The book contains the first real attempt to present a history of the heroine whose cooperation made the premier ovariotomy a possibility. This feature involved a patient and an unusual investigation that ended in the discovery of her grave in an obscure cemetery almost a century after her death.

It contains an elaborate bibliography and a carefully prepared index that makes it valuable as a work of reference upon McDowell and his time but also upon ovariotomy and the earliest efforts in abdominal surgery. It should find a place in every reference library, technical or otherwise, and no surgical library is complete without

1. Lippincott, New York, Philadelphia and London, 1921.
2. Press of the American Medical Association, Chicago, 1921.
3. J. B. Lippincott Company, Publishers, Philadelphia and London.

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this long delayed effort upon so important and such a fundamental subject.

TUBERCULOSIS AND HOW TO COMBAT IT

By POTTENGER, F. M., St. Louis, Mo.[1]

There is perhaps no other communicable disease concerning which more misinformation is broadcast, than tuberculosis. The lengthy treatises of students and investigators would bring to light the latest information on disputed points, but this is out of the question for the average patient to whom the word tuberculosis is but a recent acquisition to his vocabulary. It is unusual to discover a volume which combines the accuracy and scientific soundness of the student with the simplicity and interesting presentation of the popular writer, but Dr. Pottenger's little book for patients on "Tuberculosis and How to Combat It" is an excellent example of such a union of precision and clearness. Pottenger's complete volumes on "Clinical Tuberculosis" are noted for their thorough and scientific handling of the subject, and even though intended for the lay reader with no medical background, Dr. Pottenger in the preparation of this smaller work has applied the same methods.

All statements are direct and conclusive though not dogmatic; nothing is taken for granted and popular mistaken beliefs are shattered by the clear reasoning of the writer. The book contains forty-three chapters, the first eight chapters dealing with the nature, sources and modes of transmission of tuberculosis, followed by a series of concise chapters expounding the fundamentals of the elements entering into the treatment of the disease. The author is frank to admit our deficiencies in knowledge on many points, but has fortunately included the most modern conceptions in answering such common questions as what are good and bad air, what makes exercise harmful, what constitutes an adequate diet. Chapters on symptomatology and relation of the patient to recovery are considered with the same ability.

The vital importance of early diagnosis and intelligent treatment is stressed by the author. Though residing in a section of the country noted for its salubrious climate Dr. Pottenger treats the much disputed value of climate in an eminently fair and reasonable manner. "Wherever the disease exists, cures take place; and no matter how favorable the climate, patients who neglect their disease die of it." Not all climates are equally favorable for treatment but climate makes up so small a percentage of all the important measures which may be employed advantageously that it may be dispensed with without ruining the patient's chances of cure. The author's insistence and emphasis on intelligent treatment on the part of both patient and physician are well illustrated in his statement, "I would rather be treated intelligently in the worst climate than run wild in the best."

The author claims to have obtained satisfactory results from the judicious use of tuberculin and states that "tuberculin when given properly is of value and entirely harmless; when given improperly it may do harm." In his opinion tuberculin will add at least twenty per cent to the patient's chance of recovery.

The volume is provided with a complete and descriptive index and should receive a wide and generous distribution among the countless tuberculous patients in this country. It is unfortunate that the author did not devote greater space to the consideration of the problems confronting the patient during that very critical period following his discharge from the sanatorium and previous to the resumption of his industrial career.

1. C. V. Mosby Company, St. Louis, Mo.

A PRIMER FOR DIABETIC PATIENTS

By Russell M. Wilder, Ph.D., M.D.; Mary A. Foley, Dietitian; and Daisy Ellithorpe, Dietitian, The Mayo Clinic.[2]

Dr. Russell Wilder and two dietitians, Mary Foley and Daisy Ellithorpe, of the Mayo Clinic, have prepared this Primer for their patients. The material in mimeographed form has been used successfully at the Mayo Clinic for some time. It has been printed in book form in order to more satisfactorily meet the demand for it. This Primer was designed for use as a supplement to Dr. Joslin's Diabetic Manual, the instruction being given in more detail. For example, the chapters on Weights and Measures, Food as Energy, and Urine Testing explain, as well as state facts in such a way that the patient with no information on these subjects can easily follow them. A good selection of menus and recipes is given, with discussion of some food materials used.

2. W. B. Saunders Company, Philadelphia.

BOOKS RECEIVED

MEDICAL AND SURGICAL REPORTS OF THE EPISCOPAL HOSPITAL OF PHILADELPHIA. Vol. V. Committee on Publication, Astley P. C. Ashhurst, M.D., Harold G. Goldberg, M.D., John N. Carson, M.D., chairman. Edited by Astley P. C. Ashhurst, M.D. Press of William J. Dornan, 1920.

LES GRANDES FORMULES MODERNES DE LA NUTRITION, Leurs applications pratiques. By Th. Merrill et H. Violle. Extrait de *La Presse Medicale* du Novembre, 1921. Masson et Cie, Editeurs, Libraires de L'Academie de Médecine, Paris, 1921.

PRACTICAL TUBERCULOSIS. By Herbert F. Gammons, M.D., Superintendent, Woodlawn Sanatorium, Dallas, Texas; Assistant Instructor in clinical medicine, Baylor Medical College, Dallas. With introduction by J. B. McKnight, M.D., Superintendent and Medical Director, Texas State Tuberculosis Sanatorium, Carlsbad, Texas. C. V. Mosby Company, St. Louis, 1921.

MANUAL OF SELECTED BIOCHEMICAL METHODS, As Applied to Urine, Blood and Gastric Analysis. By Frank P. Underhill, Ph.D., Professor of Pharmacology and Toxicology, School of Medicine, Yale University. John Wiley & Sons, Inc., New York, 1921.

ABDOMINAL PAIN. By Dr. Norbert Ortner, Chief of the Second Medical Clinic at the University of Vienna. An authorized translation by William A. Brams, M.D., formerly Lieut. Com., Medical Corps., U. S. N. and Dr. Alfred P. Luger, First Assistant, Second Medical Clinic, University of Vienna. Rebman Company, New York, 1922.

NUTRITION AND GROWTH IN CHILDREN. By William R. P. Emerson, A.B., M.D., Professor of Pediatrics, Tufts College Medical School; President, Nutrition Clinics for Delicate Children, Inc.; Medical Adviser, Elizabeth McCormick Memorial Fund, Chicago; Visiting Physician (in charge of nutrition clinic) Children's Out-Patient Department, Massachusetts General Hospital, Boston. Appleton and Company, New York, 1922.

CLINICAL ELECTROCARDIOGRAPHY. By Frederick A. Williams, M.D., Section on Clinical Electrocardiography, The Mayo Clinic, Rochester, Minn. and The Mayo Foundation, University of Minnesota. Philadelphia and London, W. B. Saunders Company, 1922.

THE GLANDS REGULATING PERSONALITY. By Louis Berman, M.D., Associate in Biological Chemistry, Columbia University; Physician to the Special Health Clinic, Lenox Hill Hospital. New York, The Macmillan Company, 1921.

No government has the moral right to invest a company of men with powers which enable them to coin money of the needs of the people, and which practically doom the people to suffering or to unquestioning acquiescence in their exactions.—George Horace Lorimer.

Adv. page 54

Responsibility Note —

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FOREIGN CORRESPONDENCE

NORWICH HOSPITAL ON BUSINESS BASIS—HEADS OF LONDON MENTAL HOSPITALS MEET

(By Our London Correspondent)

THE situation in regard to British hospitals appears to show definite signs of improvement, especially outside the London area. As Sir Napier Burnett, director of hospital resources of the British Red Cross, stated in his comprehensive report on the financial position of the voluntary hospitals in England and Wales, excluding London, issued a short time ago, the provincial hospitals are grappling with the problem of effective reform in a more energetic and therefore more successful manner than those of London. The main reason why the hospitals in the country generally are meeting with greater success is because they are organizing; whereas, the London institutions, as a rule, are not doing this. At any rate, although two or three of the London hospitals have organized with excellent results, notably Charing Cross Hospital, there is a lamentable lack of cooperation and coordination among them. In fact, there is little cooperation among the hospitals in any part of the country and while the provincial hospitals have to some extent succeeded better than the London ones, this is because the authorities have placed their affairs on a more businesslike basis.

As an instance of these superior methods of management the Norfolk and Norwich Hospital, located in Norwich, the metropolis of the eastern agricultural counties of England, may be cited. Through the initiative of Mr. Drury, a prominent official of the railway system which serves the eastern counties, ably and strenuously backed by Dr. Samuel Barton and other farseeing members of the Norwich medical profession, what is known as the workmen's contributory scheme was established. These contributions are voluntary weekly levies, varying from one penny per week according to the wages of the contributors. The idea has found favor in all parts of the county of Norfolk and as a source of hospital finance has appealed and is appealing to an increased number of hospitals. Whenever a hospital takes the trouble to organize this form of collection it invariably meets with a rich reward, but, as Sir Napier Burnett points out, organization and propaganda in the form of public meetings held at the important workshops to explain hospital work must be done if success is to be obtained. Such organization and propaganda have been carried on in Norfolk and Norwich with the happiest outcome.

But this is not all that those responsible for the conduct of Norwich Hospital have done to put it on a sounder financial foundation. Everyone who is not indigent and who becomes an in-patient of the institution pays one guinea ($5.25) a week for maintenance. In addition the hospital receives, as do all hospitals of a certain size, a goodly amount from the various local Hospital Saturday Funds, and somewhat meager sums from the War Office Ministry of Pensions, from the education authorities and under the National Insurance Act.

Sir Napier Burnett strongly emphasizes the point that the amount received by the hospitals under the Insurance Act is wholly inadequate and that indeed treatment of such patients imposes an additional strain upon an already overstrained financial situation. It was plainly brought out in evidence before the Care Committee that a very large volume of work was being done by the voluntary hospitals without remuneration, both for in-patients and out-patients who are insured under the National Health Insurance Act.

The authorities of Norwich and other hospitals have shown that if common sense is employed and that if they put their shoulders to the wheel to carry out commonsense methods, they can lift these institutions from the slough of despond into which they have fallen. The Norfolk and Norwich Hospital, by using these methods, has in one year decreased a debt of £50,000 by £8,000 and moreover has run the institution successfully during the period.

Reforms in Mental Hospitals

Recently there has been severe and persistent criticism of the management of mental hospitals in this country. Such grave charges have been brought against the administration of these institutions and they have been so continually made the subject of letters and articles in the lay press, that it was finally thought advisable to call a conference to discuss the question. About 200 medical superintendents of mental hospitals met at the London County Council offices, London, for this purpose.

Sir Alfred Mond, the Minister of Health, who opened the proceedings, said that he was glad to note that the term "asylums" had been dropped in favor of "mental hospitals." The public should be disabused of the idea that lunatics were people very largely incurable for whom little could be done except custodial treatment. The adoption of modern methods of diagnosis and treatment would result in greater economy, and the more lunatics cured the greater would be the relief in expenditure. Medical

Adv. page 56

A frank talk about Postum to readers of "Modern Hospital"

Every doctor and nurse knows that caffeine—under certain conditions, or used to excess—may prove a source of extreme detriment to the nervous organism, and to the digestive function.

Caffeine, in overdoses, excites irritability of the sympathetic nervous system and unduly stimulates the cerebral cells.

The ordinary cup of tea or coffee carries anywhere from 1½ to 3 grains of caffeine—a maximum dose, even where definite stimulation is required.

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Why not avoid the deleterious influences of tea and coffee excess by giving your patient rich, delicious Postum instead?

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officers should be granted fuller facilities for post-graduate work, the only method of acquainting themselves rapidly with the subject of mental diseases. The public were still often imbued with the ideas in Charles Reade's novels; but the agitations of recent years were fictitious and untrue. He felt satisfied that all the kindness, care and good treatment possible were available in asylums in existing circumstances. It was unfair to brand the asylum service with any stigma, and the whole stigma in regard to lunacy should disappear. The public did not realize how many patients were cured and discharged from asylums and returned to their normal life as good citizens, and it was important that the cloud of hopelessness in these cases should be lifted. There appeared to be a unanimous opinion at the conference that permanent mental disease could be prevented by early treatment. If early treatment was to be given without certification, an alteration in the present law would be required, and any such alteration would be difficult to achieve unless there was a general agreement on the part of those competent to speak. The conference concluded its labors by arriving unanimously at the conclusion that early treatment of mental diseases without certification should be legalized. The conference further decided that early treatment without certification should be given only in institutions or homes approved for this purpose by the Board of Control.

Briefly the plan is to set apart seven or eight asylums, which only "voluntary boarders" may enter. Objectors to this scheme declare if the proposal is put into execution, it will bring about nothing more than a transference of names. Thus asylums having become "mental hospitals" would be divided into two parts, one for uncertified and the other for certified cases.

An alternative scheme suggested is to provide appropriate cheerful hostels adapted for early uncertifiable cases, run on a purely hospital footing; that is, free from detention, and free also from the stigma and depressing atmosphere associated with lunacy administration.

It has been further pointed out that the provision of hospitals of this nature entails no need for legislation; and it would mean eventually an enormous saving in the £6,000,000 ($30,000,000) a year now spent in the upkeep of asylums. Many empty buildings, with gardens attached, might be made available, and the starting of such sanatoriums should prove an immense boon not only to ex-service men, but to a very large number of medical men, who are at a loss as to where to recommend their patients in the very early stages.

Why should not all big hospitals have an "observation" ward in which patients suffering from mental sickness or disorder might be watched by experts in order that the type of affection might be correctly diagnosed. Skillful treatment under favorable environment will frequently cure cases which closely simulate certain forms of mental aberration and indeed will cure some cases of mental unbalance.

NEW HOSPITAL IS OPENED AT BARNET, ENGLAND

A hospital has been opened at Barnet, England, whose founder suggests that American methods of securing funds for the maintenance of hospitals might be used here. The institution was described in *The Nursing Mirror*, as follows: "Viscount Hampden, Lord Lieutenant of Hertfordshire, recently opened the New Wellhouse Hospital at Barnet. The Barnet Union is a very large one, with a population of over 100,000, and it had become imperative, even before the war, to provide more ample accommodation for the sick. The old infirmary, built in 1886, accommodated fifty-eight patients only. In 1913, being quite insufficient to meet the local needs, the guardians decided to erect a new institution to contain 192 beds. In 1916 the half finished building was handed over to the Army Council, and till May, 1919, between 5,000 and 6,000 wounded and sick soldiers were nursed within its walls. The whole of the furniture and equipment of the hospital has been purchased by the guardians from the Army Council at 10 per cent less than it would have cost in 1913. There are two wards for men, two for women, and one for children, and there is also accommodation for paying patients. This is not altogether a new departure on the part of the Barnet guardians, as they have always considered it part of their public duty to afford nursing care to those who cannot afford to have it in their own homes, and who are unable to obtain admission to hospitals supported by voluntary contributions or to pay the fees of nursing homes. The paying part of the hospital will be administered in accord with the code of regulations drawn up by the Ministry of Health. The hospital is situated on high ground, is quite in the country, and has charming views. The wards are large and airy, and the only difficulty may be the question in the troublous times of securing adequate warmth for the inmates. Lord Hampden, who expressed the pleasure it gave him to be associated with the institution, recalled the fact that in August, 1917, he had to appear in the hospital before a medical board to be certified fit to return to France. He went on to say that he had lately read some interesting details as to American hospitals. The Americans look to private patients as their principal source of revenue. They obtain subscriptions from their trade unions which cover the cost of those members who enter hospitals as patients, and they get subscriptions from the local authorities for those who are unable to pay for themselves. He suggested that the same scheme might be adopted at Barnet."

DENTISTRY IN A STATE HOSPITAL

The one great factor in the practice of dentistry in the charitable institutions, says Dr. Kent K. Kelley, of the Alton State Hospital of Illinois, is to conserve as much tooth structure as possible. It must be carried out farther in this work than in private practice, because, first, many patients cannot wear artificial restorations, or their mouths are in such bad condition from pyorrhea or abscesses that it would be impossible to make a restoration that would give satisfaction, and second, many of the inmates cannot afford to have extensive bridge work done, and it would be impossible for the state to finance it. Dr. Kent finds that almost 60 per cent of the patients in his hospital have been transferred from other institutions, yet a dental examination reveals the fact that their mouths are in a very bad condition. To elevate the standard of dentistry in charitable institutions, he feels that the dental department must have the hearty cooperation of the medical staff, as well as the cooperation of the dentists of the various hospitals.

"The question of temperaments is almost entirely unstudied for any practical purpose except by medical men. And some patients are thought to suffer much less, some much more, than they really do. I have known a Celt rouse the whole hospital because his toes were cold. While, if an Anglo-Saxon said his back was cold, he was generally within twenty-four hours of death."—Florence Nightingale.

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LETTERS TO THE EDITOR

WHY NOT A DEMOCRATIC HOSPITAL STAFF?

The question is being asked,—why the frequent change in the nursing personnel of our larger hospitals? Why do nurses wander like gypsies from hospital to hospital seemingly never satisfied to remain more than one year, or at best two? Is the fault with the nurses or with the hospitals?

It is probable, in some instances, that the fault is with the individual nurse, but it stands to reason that a whole profession would not develop, as the nursing profession seems to have done within the last eight or ten years, into a procession of tramps, if there were not something fundamentally wrong somewhere other than with the nurses themselves.

It is my humble opinion that the trouble lies in the unprogressiveness of our hospital management. Now, while the whole world is throwing off militarism, let our hospitals follow suit. Let them relegate to the dump heap of other army implements, the military ranking of their department heads and adopt instead a regime similar to that of our schools or of big business.

This would put the graduate nurses at the head of each department on an equal footing and remove them from the authority of the training school superintendent, or the superintendent of nurses as she is usually called.

In some hospitals, where they have been fortunate enough to secure as superintendent of nurses a woman of broad experience and large mind, this present arrangement does very well, but unfortunately the majority of training school superintendents are given more authority than they have a capacity for, as will be shown by a few instances that I call to mind.

One hospital had a splendid anesthetist, and some other institution offered her a better salary. The board of the hospital where she was employed was willing to give her the same salary as that offered by the other hospital and told the superintendent of nurses so, but she let the anesthetist go and afterward made this remark to me: "I was sorry to have let Miss Dash go. She was the best anesthetist we have ever had, but if she was given the salary she asked she would then be getting as much as I am, and of course, I could not have a nurse under me getting the same salary as I." And pray why not? Why should the anesthetist, or the dietitian, or the pharmacist, or the operating supervisor be under the training school superintendent? It stands to reason that they, having made a study of their particular branch of hospital work, know more about it than the training school superintendent, and are entitled to as much salary as she, if the financing board is willing to pay it.

In another instance, a superintendent having made rounds over the hospital, told me of a suggestion that one of the department supervisors had made to her. She admitted to me that the suggestion was good, but said she would not adopt it because she could not be taking suggestions from those under her. Now the Standard Oil Company and other big businesses have a system by which they solicit suggestions from their employes; these suggestions are carefully considered and any feasible ones are not only commended but rewarded. Now if such a system redounds to the success of an institution like the Standard Oil Company, whose business is only a question of dollars and cents, why should a superintendent of nurses be so little as to ignore a suggestion that would further the good of an institution whose business is a question of human lives?

Under like supervision, the graduate head of a department feels cramped, becomes dissatisfied and ultimately joins the procession of shifting nurses, ever hoping to find that place where her initiative will be recognized and appreciated.

The superintendent of a hospital should be a well paid man with training and experience that is willing to devote his whole time to the work. The training school superintendent should have authority over her pupil nurses alone, and along with the head of every other department be responsible directly to the hospital superintendent.

The work of hospital departments overlap a great deal, and this would require cooperation on the part of each department head. This cooperation could be furthered by meetings, fortnightly or monthly, such as are held by college faculties, the superintendent of the hospital presiding, all department heads meeting on equal footing, a free exchange of ideas being encouraged, all complaints registered and settled, constructive criticisms made, and anything else that would pertain to the general welfare of the institution taken up. Such details as the employment of orderlies and maids could be discussed at these meetings.

When the graduate nurse, as the head of a department, is given a chance to expand, to put into her department her own ideas and experiences and to feel direct responsibility for its development, then will she become so interested and satisfied that the hospital will be able to retain her services for a long period of time. This will be of great benefit to the hospital and to the patient for whose comfort hospitals are maintained. The world fought for democracy, why not let us have a democratic hospital staff?—Anna L. Smith, R.N.

"In general, patients who are really ill do not want to talk about themselves. The 'nervous case,' on the other hand, delights in figuring to nurses and others a fictitious danger."—Florence Nightingale.

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THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment and Administration of Hospitals, Sanatoriums and Allied Institutions, and to Their Medical, Surgical and Nursing Services

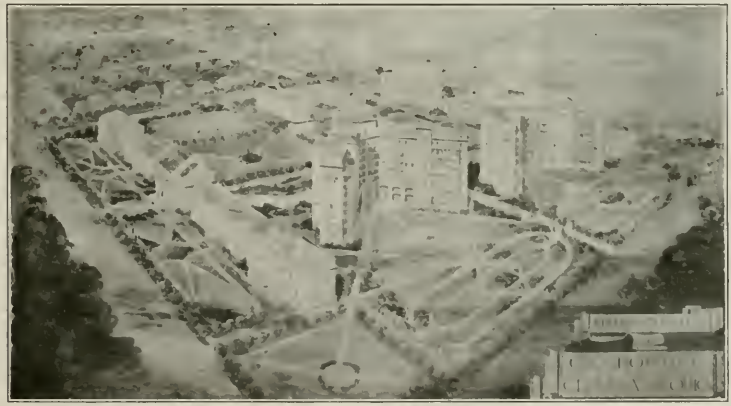
Vol. XVIII *May 1922* No. 5

THE NEW CITY HOSPITAL OF CLEVELAND

By J. H. MACDOWELL, Architect, Cleveland, and S. S. GOLDWATER, M.D., Hospital Consultant, New York

In May 1920 the citizens of Cleveland, O., by a large majority vote authorized a bond issue for the extention and reconstruction of the City Hospital. The work of planning and erecting the proposed buildings was assigned to the present writers under the direction of Dudley S. Blossom, director of the department of public welfare. Mr. Blossom began by calling a series of conferences for the purpose of formulating a program. The participants in these conferences were a large and representative advisory committee of the City Hospital staff, the architect, the city's hospital consultant and Dr. C. H. McFarland, superintendent of the City Hospital. Later, in the progress of the work, the plans were reviewed and approved by an advisory commission of prominent citizens named by Director Blossom.

After a careful survey of the situation had been made, it was decided to undertake with all possible speed the construction of a new building for general hospital purposes, designed to accommodate approximately 600 patients; an extension of the contagious building to accommodate 100 additional patients; a modern psychopathic building with a capacity of 150 patients; and an addition to the nurses' home, containing seventy-five rooms. In addition, the program that was adopted called for the alteration of the administration building, for the enlargement and equipment of the main kitchen (the shell of which had been erected some years previously), for additional equipment for the laundry, and for necessary alterations to the power and refrigerating plants.



The most important and striking feature of the reconstructed group is a ward building of an extremely flexible character, so planned as to meet

the fluctuating requirements of any or all the clinical departments of the hospital. One of the most difficult administrative problems which municipal hospitals have to meet is a variable demand for beds in the several departments. Municipal hospitals cannot, like private institutions, arbitrarily determine the number and character of the cases which they will treat, but must be prepared to give to the community any kind or quantity of service, as the need arises. An examination of the plans of the principal ward building will show how this requirement has been met. Instead of providing a number of isolated buildings, we have combined in a single building ward units so arranged, so sub-divided, and so related to each other, that one or more ward units or parts of units can be assigned to given clinical departments in the most flexible way. For example, a given male or female medical, surgical or special department may consist of one ward of from 32 to 37 beds, of two such wards, or of one whole ward and part of another; and the building is so planned that new assignments can be made from time to time without disturbing the ward routine in any way, the key to the situation being the location and arrangement of the nursing center or service rooms of the ward.

The Typical Ward

Study of a typical ward unit shows that it is adapted for the treatment of any type of disease either indoors or outdoors. Included in each unit is a large open ward with an attached veranda having a southern exposure, the capacity of the open ward being sixteen beds. In some instances, as in the case of the children's ward, this open ward may be divided into individual cubicles. In addition each unit contains several side wards, each having a capacity from one to four beds. There will be approximately an equal number of beds in each single large ward and in its attached and dependent group of smaller wards, so that the segregation of patients, individually or in small groups, can readily be affected. The ward "offices," consisting of chart and medicine room, serving kitchen, sink and utility room, linen and supply room, etc., are located in the middle of the unit, thus minimizing the distance that must be covered by nurses in caring for patients. Separate balconies are provided for convalescents, and there will be a day or dining room for convalescents attached to each ward unit. Attention is called to the location, accessibility, and southern exposure of the day rooms, elevators, corridors, verandas and of the connecting balconies.

The elevators are so grouped that one or more can be operated according to need; a considerable economy in the operation of the elevators will result from this grouping in a single elevator tower. All of the verandas and balconies face the south, the best exposure both in summer and winter, and all are semi-protected.

Care has been taken to avoid completely surrounding any interior corridor with service rooms; need for the installation of expensive mechanical apparatus for the ventilation of the corridors has thus been avoided.

More than half of the total number of beds in any ward can be placed out of doors, and as a considerable proportion of the patients in any ward are likely to be convalescents, this means that the hospital can practically be converted into an open air hospital during the spring and summer. Outdoor treatment can, of course, be given also in the winter and any part of the building can be used at any time for the treatment of patients suffering from tuberculosis, from chronic diseases of the bones and joints, from pneumonia, or from any type of disease for which special outdoor treatment may be desired.

An important feature has been made of the receiving wards for male and female patients. These wards will occupy the ground floor. All newly admitted patients will ordinarily be placed in these wards first; here the medical and social histories will be taken and a thorough examination made to determine the proper classification of each case and to insure the detection and exclusion of contagious diseases. By the exclusive assignment of physicians and nurses to the admission ward, prompt and efficient attention to all newly admitted cases will be obtained. The social service department will be particularly active and useful in this department.

Close to the elevator tower we have placed a series of examining rooms, containing special equipment for surgical treatment, for medical examinations of general character, and for the special examination of the eyes, ears, the nervous system, etc. These rooms will be the clinical headquarters of the consultants in the various special departments of medicine and surgery, and their location is such that patients can readily be brought to them from any part of the hospital for special examinations. Four clinical laboratories similarly located will furnish needed facilities to the resident staff, will facilitate the prompt examination of secretions and excretions, tissues and fluids of various kinds, and will relieve pressure on the central laboratory.

For the lectures, conferences, and clinical demonstrations, which form so valuable a feature of the work of the progressive general hospital,

a clinical conference and lecture room has been provided on the tenth floor.

The uppermost full floor, the ninth, has been set aside for operating rooms for general and special surgery and for birth rooms for the maternity department; here are six major operating rooms, two rooms for cystoscopy, bronchoscopy, etc., and four birth rooms. The maternity patients will occupy the whole of the floor next below.

The location of the building which we have just described has been determined in part by a desire to obtain the best possible exposure for the wards, and in part by the location of the pre-existing principal service corridor; the latter, extending east and west across the grounds, begins at the administration building and ends at the power house. Directly north of this corridor, and directly connected with it, are the kitchen and laundry. The location of the principal ward buildings directly south of this corridor will make the domestic service as convenient as possible.

1. Future buildings.
2. Administration.
3. Admission.
4. Dispensary.
5. General Hospital.
6. Psychopathic.
7. Employes.
8. Laundry.
9. Contagious building (old).
10. Contagious building (new).
11. Nurses' home.
12. Garage.
13. Boiler house.
14. Future pavilion.
15. Future pavilion.
16. Future pavilion.

The second largest building in the new group is the psychopathic unit. The lines of this will follow those of the V-shaped main ward building, for it is intended eventually to raise this three-story and basement building to the full height of the adjoining ward building and to convert it to general hospital uses. In the meantime the interior of the building has been modified in order to meet the special purposes of a psychopathic building. The ground floor of the psychopathic building will accommodate a small special dispensary, a hydriatic department, rooms for occupational therapy, a psychological laboratory and a small lecture or conference room. Three floors above the ground floor accommodate six distinct wards, three for men and three for women. Two of these wards have many special details of construction and equipment needed for the proper care of patients who are mentally disturbed, but a complete description of these details is reserved for future publication.

The City Hospital has frequently found itself short of accommodations for contagious cases. The present contagious hospitals includes four ward units with a total capacity of 100 beds. The new building which will extend to the north of the present contagious group will have a capacity of 102 beds. In the basement there will be storerooms, a kitchen and dining rooms for physicians and nurses. The three upper stories are devoted exclusively to patients.

This building is planned without interior connection between one floor and another; the isolation of floor from floor is so complete that to all intents and purposes each floor is a separate hospital. By the arrangement of special entrances for patients, doctors, nurses, maids and visitors, it will be possible to establish an ideal anti-epidemic technique.

In planning for the technical administration of a contagious ward, one seeks to insure the proper classification of cases on admission, the avoidance of the contamination of one patient by another, and the complete disinfection of everybody and everything that leaves the ward. Special dressing rooms are provided where the working staff can cleanse themselves thoroughly before leaving the ward, after first removing all garments that may have been in contact with the sick or with infectious material of any kind. There will be an incinerator on each floor for the destruction of such infectious material as cannot be disinfected and preserved. The ward kitchen, the linen room, the sink room and the operating room will each be provided with sterilizing apparatus to insure the disinfection of all utensils, linens, etc., which are to be re-used. New patients will be admitted into individual rooms, there to remain, as a rule, until the convalescent period has been reached, or at all events until there remains no doubt as to the character of the disease. For convalescents eight-bed wards (divided, however, into individual cubicles) have been provided.

Every service room in the contagious wards can be entered from outdoors, and the same is true of the wards themselves, both large and small. By the use of a narrow balcony, which is carried along the whole length of the building,

all of the patients' rooms can be inspected and the patients themselves can be seen without entering the rooms. It is believed that this feature of contagious hospital construction will add materially to safety and to the convenient administration of the wards.

Nurses' Home and Main Kitchen

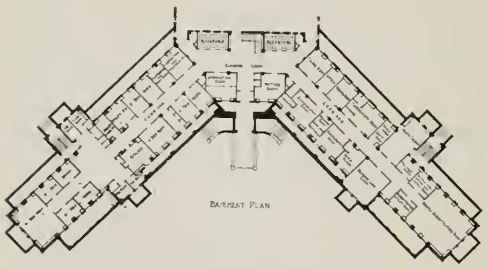
The new wing of the nurses' home consists of a three-story and basement building about 120 feet long. The basement contains a large gymnasium, and a small kitchenette and hand laundry. The upper stories are divided into individual sleeping rooms. An interesting feature is the open-air sleeping space on the roof.

The central kitchen and laundry equipment of the City Hospital have been brought up to date. The kitchen will be an especially noteworthy feature of the remodeled plant. The framework of the new kitchen building was erected some years ago; the kitchen itself, which was not fully equipped at the time, is now being provided with the modern equipment for which it has been waiting.

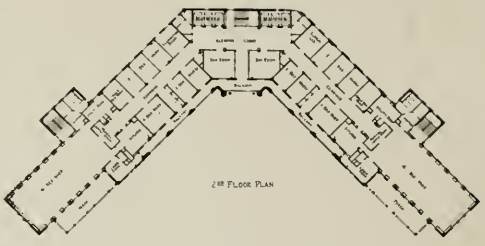
The top story of the present administration building is to be remodeled to accommodate additional resident physicians. Plans have been studied also for an admitting department, for a modern x-ray plant, for a center for physical therapy, for a ward for police cases and for a future dispensary building. For the time being, an out-patient service will be conducted in the remodeled first floor of the old hospital building.

Architectural Treatment

Consideration of the architectural treatment of the facades presented certain difficulties. There was evident the existence of lack of harmony in design, which necessitated a general cramping of style and creating complications in evolving a successful architectural treatment for the new buildings. The inception of the original hospital group years ago was, unfortunately, in no way inspired by a comprehensive and predetermined



The basement plan of the main ward building; receiving ward and temporary x-ray department.



Typical floor plan of main ward building.

scheme; its "raison d'etre" was questionable and it grew at random much in the manner of an industrial plant rather than as a carefully cultivated creation. Each individual who had to do with its evolution had followed his own fancy, establishing no precedent which could be consistently followed. So diversified were the styles hitherto employed that nearly all styles popular from post Civil War time until the present were in evidence. There was also the element of time to contend with and the spirit of the age directing things as it does along economic lines, all of which were obviously dominant factors in determining the character of the latest additions. This brief survey of conditions at the site is for the purpose of elucidating the great importance which extraneous conditions exerted in the design and the difficult obstacles encountered.

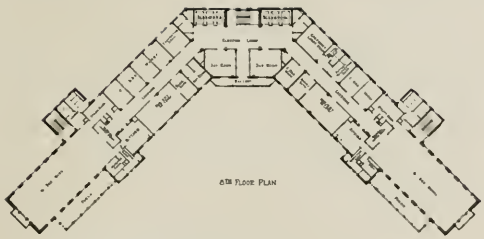
The plan being essentially utilitarian, the various facades resolved themselves into a problem of fenestration; hospital work making this naturally of paramount importance owing to the absolute necessity of maximum light, air and sunshine in conjunction with all departments, and in this case the requirements of adequate sun and airing porches and balconies all of which governed the treatment very materially, occurring as they did on the south or principal facade. After much deliberation and study a comprehensive line of procedure was evolved.

Character of Construction

The general hospital building, psychopathic building, and new contagious building are of the skeleton steel frame type of construction, fireproofed with concrete and tile, H columns forming concentrated supports.

The unusually sandy and clay streaked strata with water-bearing sand and in some instances quicksand, all of which is common in the vicinity of Cleveland, made the subject of soil and foundations a very important one and rendered the use of spread footings necessary.

The subject of floor construction was carefully studied wth a view to hospital requirements and cost. A concrete joist and arch, metal pan system



Eighth floor plan of main ward building; maternity ward.

was decided upon. The metal furring of ceilings, necessary for finished ceilings with concrete joist construction was hung five inches below reinforced concrete joist allowing a dead air space between ceiling and floor slab, serving thereby the double purpose of sound deadening between stories and provision for pipe and conduit space for plumbing and electrical trades. This, in turn, rendered unnecessary the use of cinder fill under finished floors.

Exterior walls, except basement and sub-basement stories, are constructed with buff wire cut face brick backed with construction tile. All trimming is of Amherst sandstone. Interior partitions are of hollow terra cotta and gypsum block serving special requirements.

Special attention was given the design of windows at the psychopathic building with a view to preventing the escape of patients through windows, transoms, or door openings and the breaking of glass at these openings. This was accomplished by the arrangement of grilles and double sash divided into small lights of plate glass.

Operating room windows are constructed with ground plate glass fitted into metal frames, sash and muntins. Windows at operating rooms are fitted with metal framed screens checking the radiation of radiators set below window sills for the purpose of counteracting cold draughts from large glass areas at exterior walls. This gives the required radiation for operating rooms without the excessive warmth from radiant heat or chill from north winds.

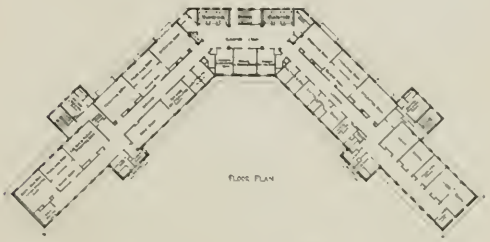
All exterior doors and windows are of white pine fitted with weather strips and bronze ventilators set at bottom rails. Ventilouvers are fitted with screens and are adjustable to the weather. All openings up to fifth story are equipped with metal frame screens. All interior doors, sash and trim, are of hollow metal with enamel finish.

Stairs and platforms are constructed of steel with pressed sheet steel treads and risers ready to receive the finished treads and risers. Main stairways in the general and psychopathic buildings are finished with pink Tennessee marble treads, risers and stringers with sanitary cove at vertical intersections. All other stairs have mastic filled steel treads and paneled steel risers.

Finished Floors

Terrazzo, marble, tile, mastic and linoleum cover the entire variation of finished floor material in the hospital buildings except at sub-basement where cement was used. Of these terrazzo is preponderant. All porches and balconies are finished with terrazzo with sanitary cove and six inch base. Floor of rooms occupied in connection with cardiograph and radiograph equipment are finished with mastic laid on a cork tile for purposes of insulation. These rooms are also insulated with ¼ inch sheet lead at all walls and ceilings. Lobby entrance doors are finished with various pink and gray Tennessee marble with polished marble wainscot. Floors of all corridors consist of linoleum framed with a brass strip into terrazzo border and base. This linoleum strip continues from corridor forming a walking surface between feet of beds of 16-bed wards. Except for this strip in the large wards, floors of all ward rooms are finished with terrazzo with special terrazzo base constructed to prevent the contact of heads of beds with plastered walls. Floor and base of service kitchens are finished with quarry tile and have glazed tile wainscoting, while all toilet, bath, utility and sterilizing rooms are finished with ceramic floor tile and white glazed tile wainscot. Operating rooms have finished floors of 4x4 vitreous gray tile and glazed tile wainscot. The general and psychopathic buildings are equipped with clothes chutes.

The plumbing equipment maintains, as the dominant factors, sanitation and utility. The drainage system is of the individual vent type with cast iron pipe wherever possible. Genuine wrought iron pipe is used elsewhere, except for concealed hot water piping where brass is used. The toilet rooms for the patients, nurses, and general public present no special features. In certain parts of the building, bathing slabs are used in place of bath tubs. These are provided with thermostatic water mixers. All ordinary lavatories for the use of doctors and nurses are pro-



Ninth floor plan of main ward building; operating and delivery room.

vided with elbow mixing valves and no waste stopper. In the contagious building and all operating rooms, knee action mixing valves are used to insure maximum sanitation. The hospital is provided with continuous flow and portable tubs.

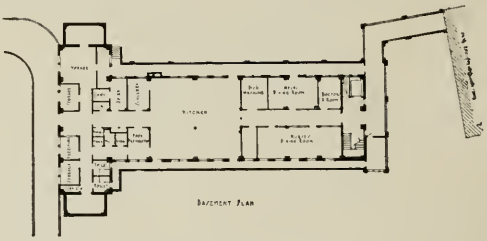
In the two ward buildings each floor has two utility rooms and two diet kitchens. In the contagious building one of each is provided. The diet kitchens contain kitchen sink, gas range, steam table, refrigerator, dish sterilizer, garbage receptor. Flint ware is used for sinks, having the advantage of not crazing and being very hard. The refrigerator is brine cooled and has solid porcelain lining.

Each utility room contains a utensil sterilizer, utility sink, bed pan warmer, blanket warmer, clothes dryer and brine cooled specimen cabinet. In the contagious and children's sections a stool sterilizer is added.

Each two operating rooms have a common sterilizing room containing water sterilizers, utensil sterilizers, instrument sterilizers, instrument sink, utility sink and wash up sinks. A separate sterilizing room contains three drum sterilizers.

This institution has a modern boiler plant, consisting of six 250 H. P. water tube boilers of the Sterling type with "V" type automatic stokers. No mechanical draft equipment is used in connection with the 175 foot smoke stack. Coal is delivered by a run-about conveyor discharging into large hoppers built above the stokers, and an ash tunnel is provided under the boiler room floor and ash is handled by means of a steam jet conveyor.

All steam required for heating and other purposes is distributed from this central boiler plant at about 100 pounds pressure, the pressure being reduced in the buildings to suit the service required. The heating systems in the buildings which formed part of the original group are steam of the direct and indirect type. The buildings that were erected before this program was started are heated by forced hot water. The new buildings are also heated by forced hot water, except the ninth and tenth floors and the hot rooms and baby bath rooms in the new general hospital building. The ninth and tenth floors are heated by steam partly because the operating rooms are located on the ninth floor of this building and heat would be required in these rooms at times when the central hot water heating system is shut down in mild weather. Another reason for using steam on these floors is that the static head on the radiators on the lower floors would be too high if the hot water system was carried to the tenth floor of the



Basement plan of contagious building.

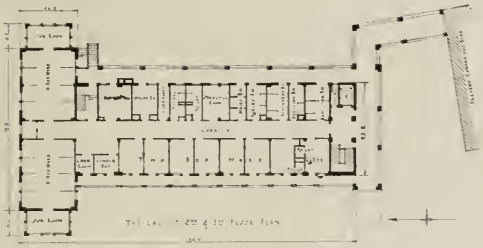
general hospital building, unless the existing radiators were taken out and extra heavy radiators substituted. Hot water for heating is circulated by pumps at the central plant and this water is heated by exhaust steam from the turbines operating the pumps and other steam using auxiliary equipment, and by live steam.

The hot water heating system is designed to maintain a temperature throughout the buildings of seventy degrees in zero weather. The operating rooms and labor rooms have sufficient steam radiators to heat these rooms to 85 degrees with an outside temperature of 10 degrees below zero. The babies' bath rooms have sufficient radiation to maintain a temperature of 75 degrees with an outside temperature of 10 degrees below zero. The radiators in operating rooms, labor rooms and sixteen-bed wards are under thermostatic control.

In the general ward building the operating rooms, labor rooms and corridors on the ninth floor are supplied with fresh air by mechanical means. An individual duct system has been installed, viz., one duct for each room. Each of these ducts is fitted with a mixing damper at the heating coils, the damper being operated by a thermostat in the rooms to be ventilated. The purpose of this arrangement is to maintain a constant temperature and make it possible to heat the rooms to a certain extent without the steam radiators.

The exhaust ducts for the operating rooms are arranged so that air can be taken from a point near the floor or near the ceiling, as desired. The exhaust system for the ninth floor connects to all the rooms to which air is supplied and a separate supply fan and exhaust fan is furnished for this floor so that it will be possible to heat and ventilate this section of the building without reference to other sections.

The ventilation of the general ward building, aside from the ninth floor, is by mechanical exhaust only, this system being connected to the small wards, kitchens, utility rooms and toilet rooms. This exhaust system is divided into three sections, one for wards and similar rooms, one for



Typical first, second and third floor plans of contagious building.

utility and toilet rooms and one for kitchens.

The psychopathic building exhaust ventilation is similar to that of the general ward building except that the supply of fresh air in the psychopathic building is confined to the disturbed patients' ward, this being for combined heating and ventilating service. The new contagious building is equipped with one exhaust fan for ventilating toilets and one exhaust fan ventilating kitchens and utility rooms. The kitchen duct system is quite distinct from the utility room duct system, the two coming together at the fan inlet. In the nurses' home provision is made for mechanical ventilation of toilets only. In the laundry large flat work ironers are equipped with vent hoods which are connected to an exhaust fan.

The original plans of the boiler house provided space for the installation of a central ice making plant and as investigations showed that money could be saved by making all ice and distributing brine to the various buildings for refrigeration, advantage was taken of the space provided and a complete plant installed. The plant consists of two 60 ton CO_2 refrigerating machines, one driven by a direct connected Corliss steam engine and the other by a 100 H. P. motor with belt drive. The ice tank has capacity for seven tons of ice and the brine cooler for 75 tons of refrigeration. The condensing coils have capacity for 90 tons of refrigeration. Brine is circulated by two centrifugal pumps and one steam driven piston pattern pump, the latter being for emergency use.

The electric light and power are distributed from a centrally located transformer vault through a tunnel to the various buildings of the hospital group. All wiring and cable work installed in the tunnel is protected by iron conduit. The wards are lighted by ceiling fixtures which provide general illumination. These are designed for cleanliness and eye comfort. Additional local lighting at beds is provided by means of brackets with plug receptacles for vapor kettles or examination lamps. The night lighting consists of lamps recessed in the walls and covered with a plate of glass flush with the wall. These outlets are located about eighteen inches from the floor, so low that the light which is thrown on the floor cannot possibly disturb the patients.

A system for paging doctors is used, consisting of lamp annunciators located in the corridors.

The nurses call equipment is a simplified "silent" system of lamp signals operating at the lighting voltage. The signals from the bedside push buttons indicate at the nurses' stations, and in the utility rooms and diet kitchens if desired. There are also red lamp signals over the doors of the large ward and over the doors of each separate room. These are considered sufficient to guide the nurse to the bed from which the call came and no individual bedside signal lamps have been provided.

The general ward building is equipped for taking cardiograph records of patients occupying any ward or private room in the building. A receptacle is installed in each ward and in each corridor so that by means of a flexible cord any patient may be reached from one of these stations. The wires extend from these stations or receptacles through a system of conduit to the laboratory on the first floor. In this laboratory are located the cardiograph machines. In order to avoid any disturbance from vibrations or from moving electric machinery the motor generator for supplying power and to charge the batteries is located in the sub-basement but controlled from the laboratory. Stations are also located in the contagious wards.

An electric time clock equipment of standard construction with a master clock in the administration building will provide accurate time in all departments. The buildings are protected by a code ringing electric fire alarm system with central control in the administration building.

In the general ward building are two x-ray rooms, a fluoroscopic room, and a dental x-ray room arranged in one department in one of the wings of the basement floor. The systoscopic rooms are located on the ninth floor with the operating rooms. In the basement of the main building, a thermotherapy room will furnish electric baking facilities unusual in variety and capacity.

New building construction included in this building program comprises 3,752,000 cubic feet, divided as follows:

General Hospital Building	2,344,000 cu.ft.
Psychopathic Building	722,000 cu. ft.
New Contagious Building	384,000 cu. ft.
Nurses' Home Extension	275,000 cu. ft.
Kitchen Extension	26,000 cu. ft.

The 16-bed wards contains 1,350 cubic feet per bed.

THE CARE OF RADIUM IN THE HOSPITAL

By HOWARD A. KELLY, M.D., Baltimore

IT GIVES me pleasure to write on the care of radium, as I have been intimately associated with its use from the very first, being one of the pioneers in this country. It is also a pleasure as I can speak more freely and with unrestrained enthusiasm as to the admirable arrangements in our institution in Baltimore developed under the skilled hands of my colleague, Dr. Curtis F. Barnam, in association with Dr. F. West, an efficient colaborer in all our technical laboratory work.

As to the financing of a supply of radium I may say that the amount of radium required for lesser treatments, that is to say the treatment of local lesions minor as to size, must be at least one or two hundred milligrams; the present value of a milligram of radium is $120. For larger treatments and for general use one needs from one up to several grams. The amounts named are always based on the quantity of radium element involved, and do not designate the amount of the salt of radium bromide, sulphate or carbonate.

The doctor who proposes to use radium, applying it himself, ought to specialize in its application as it now constitutes a distinct specialty in medicine, more difficult even than x-ray work. On account of this lack of specialization much harm is being done to great numbers of patients in all parts of the country, while doctors are painfully gaining wisdom and accumulating their "experiences." The smaller amounts of radium, from one to several hundred milligrams can be used in the form of the salt in a stout hollow needle, in a flat applicator or in cylinder, but for the larger quantities the emanation, the active gas given off by radium, is by far the best method of application—as it is more flexible in its use, more adaptable to a variety of conditions and safer in the conservation of the supply, for if the emanation is lost only a day's supply is gone. The use of any large amount of radium involves (1) precautions for its preservation, and (2) the protection of the personnel handling it from any undue exposure to the rays, in other words from taking repeated involuntary treatments.

Protection of Radium and Workers

All over the world in a variety of clinics smaller amounts of radium (valued at from $5,000 to $10,000) have been lost either by a patient walking off with the application or by it being thrown into the fire or the ash heap with discarded dressings. The only way to obviate this is to appoint one reliable person, whose duty is to know at all times where the radium is and what it is doing, to see to the count each time it is changed from one to another patient. When not in use it should then be delivered to the office safe, identified and receipted for, and again receipted for when taken out. When several grams of radium in solution are handled more thorough-going methods of conservation must be employed. First of all a burglar-proof vault provided with a time clock opening the door at a fixed time each day is a necessity. Inside the vault the radium must again be enclosed in a stout lead box. Two or more persons must invariably be on hand as long as the vault is open. An alarm clock and a light in a conspicuous place show at once whether the vault has been tampered with.

Danger to workers is through breathing the emanation and from exposure to the rays over any considerable period of time while handling the radium. The detrimental action of the radium is on the blood-making apparatus of the body and the glandular system, producing a profound rebellious anemia. If the fingers are much exposed the skin becomes thin and sensitive, and the tips take on a pencil form.

We obviate these dangers:

(1) By cutting down to a minimum the exposure of the personnel.

(2) By screening off the radiations while the emanation is being pumped off and manipulated in transferance to its final containers.

(3) By eliminating the dangers from unavoidable leaks by means of strong ventilating fans which rapidly change the atmosphere of the room.

We protect our technicians by limiting the amount of the exposure of each one. We have a staff large enough to put a new man on each day in the week (no pumping is done on Sunday), making a staff of six liable to duty; this we believe is a far better plan than to keep one man on for several months, say "six months on and three months off," as I understand is done in one large clinic abroad. Such a plan we feel is knocking a man down and then trying to build him up again.

Under our method there can be no cumulative effect on the blood while at the same time the relation of the worker to his work, which is highly technical and calls for deftness maintained by constant practice, is not impaired by detachment for a long period.

The two who oversee the pumping off of the emanation enter the vault at any early hour when the clock permits and prepare the apparatus by greasing the stopcocks and generating the oxygen for sparking down the undesirable H + O gases which accumuate along with the emanation from the disintegration of the water by the radium solution. The mercury pump is then put in motion to concentrate the emanation gas which has generated in the past twenty-four hours into a collecting tube in which it is next transferred to the condensation room where it is further purified by removing the excess of oxygen, hydrogen, nitrogen and helium. When purification is effected, the emanation is concentrated into a tiny glass bulb and into a number of glass needle points or spicules of capillary size which are at last ready for measurement. This final step which determines the quantity of emanation in each little container, is not taken until after three and one-half hours when the emanation has ripened, so to speak.

All of these steps are completed by 10:30 a. m. Aside from the shifting of the personnel mentioned, further protection of the workers is secured by observing the following precautions:

(1) In the vault our very simple pumping apparatus greatly shortens the time and proportionately the amount of exposure. This step may last from twenty minutes to one hour.

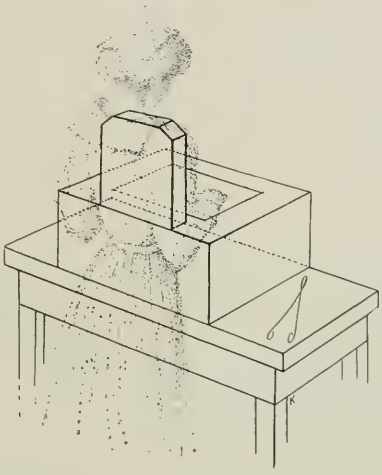
(2) Around the bulbs containing the stock radium solution we have disposed a ton and one-half of lead, forming a three-inch lead wall between the operator and the element.

(3) When the emanation is pumped out of the inner apparatus, and while it is being propelled through the glass tubing to the mercury bath where it is collected, the operator is protected by a screen of lead one inch thick.

Note well that during these earlier stages the emanation is not as dangerous as later when it has maturated; at first it gives out alpha rays which do not escape from the tube, and is in process of forming radium A, B and C. The active deposit which alone is to be feared, on account of the fact that beta and gamma ray activity does not reach its maximum until three and one-half hours have elapsed.

(4) Vigorous electric fans are turned on before the vault is entered, completely changing the air in five minutes and removing all traces of mercury vapors and emanation (a most important precaution!). Similar precautions are taken in the condensation room following this. The cost of running these fans, about two cents an hour, is the only cheap thing connected with radium.

From the hands of the technicians the radium now ready for therapeutic use goes into the hands of the doctors and nurses who make the applications to the patients. Treatments dealing with so many diverse diseases call for a variety of apparatus and applicators of all sorts entailing more or less exposure, where again precautions must be enforced.



Nurse in front of deep lead box containing radium emanation engaged in placing emanation in the various apparatus for the treatments. The block of lead, resembling a tombstone, protects the chest and neck.

The first step in these practical hands is to assume charge of the day's supply of emanation in a special room where it undergoes the manipulations necessary to adapt it to its sundry uses. In this room it is first deposited in a lead box six inches deep, and with walls three inches thick. The box stands on a heavy iron safe, in which the needle points are kept. In order to protect the thyroid and the breasts of the nurses, the heavy lead plate extends up on the side next to the body of the person in front of it to the height of the chin. (See Fig.)

The nurse looks over this and works around it on either side. In all manipulations direct contacts are avoided by using forceps and tongs twelve to fifteen inches long.

When the emanation, suitably prepared, is taken to a room for a treatment, it is held as far as possible from the body and deposited in the room at a far corner until at the last moment it is called for. In a small room it is kept altogether outside until wanted. When it is necessary to hold it in the hands for a short contact application, say for one or two minutes, long forceps are used and the doctor or nurse stands at arm's length and with the body as distant from the patient as possible.

We employ one head radium nurse, a woman of high intelligence, as instructress for the others. She remains permanently on duty but never gives treatments. Instructions are given with dummies. The remaining nursing personnel remains at work

for six weeks and no more. We plan for each one two weeks day work, two weeks night work, and again two weeks day work; three nurses are on duty besides the head nurse. The doctor who admits the case decides alone or in consultation what amount of radium is needed in a particular case and how it is to be applied. The doctor in charge of the treatment rooms then works out how he can best give the allotted treatment with the amounts of radium at his disposal; for example, if two gram hours at an inch distance over a growth is the order, if he has two grams in a tube it is applied for one hour; if, however, he has but one gram free, it is applied for two hours which is of course the equivalent. It constantly falls to the lot of the writer to give the uterine cervical treatments in the cases of cancer. The patient as a rule kneels in the knee-chest posture; the tray of instruments is by the bed and two nurses assist; the speculum is inserted, the area exposed, and the emanation brought from the most distant part of the room, inserted and packed into place. The patient then lies quiet until the time calculated is up, usually from two to three gram hours.

Examinations of the Blood

In the case of the doctors and technicians the blood is examined at regular intervals (monthly). Blood examinations of the nurses are made on entering the work and again upon leaving, and these records are kept on file. As yet we have not been willing to take on a nurse with a low blood count; this however needs investigation. Nor do we accept a nurse whose blood count drops while she is on duty. Anyone on the permanent staff whose blood drops is taken off for an indefinite period.

It appears probable from observation that there are great individual differences in the resistance to changes in the blood. By these careful studies we are able to accumulate a group of nurses available for radium duty who are not susceptible, so that while we have not as yet called on them to serve oftener than once a year, we feel that we shall in all probability be able to shorten this period to six months with safety.

Such are the many and varied precautions taken to avoid injury to our co-workers, precautions which have grown up with our experience. I repeat what I have said, that the evolution of this piece of scientific machinery has been due to the assiduous attention of my colleagues, Drs. Burnam and West, to all its details. Their great reward is the confidence we now feel begotten of the success in overcoming a dangerous hindrance in handling this new potent and still mysterious element.

INSPECTION OF CLINICAL THERMOMETERS

An inspection of clinical thermometers manufactured in the state of Massachusetts resulted in the rejection of 49 per cent of them which bore the official manufacturer's seal. Following this investigation legislation was enacted which gives to the director of standards the authority to test any clinical thermometer in the state. The following account of the investigation and the new legislation is given in the annual report of the director of standards:

"Under the provisions of Chap. 152, Acts of 1917, several manufacturers of clinical thermometers had submitted samples of their product intended to demonstrate their ability to maintain a high degree of accuracy and were thereupon authorized to affix the manufacturer's seal instead of submitting thermometers to the director of standards for test before offering them for sale in Massachusetts. Later investigation developed the fact that some of these manufacturers were abusing this authority by selling thermometers bearing the manufacturer's seal which would not pass a satisfactory test for accuracy. The existing law did not authorize taking possession for official test of any thermometers which bore the manufacturer's seal and further legislation appearing necessary the director petitioned for and the legislature enacted Chapter 263 as an "emergency" act which became immediately effective when signed by the governor on April 12.

"This act provides that the director of standards may inspect and test any clinical thermometers in the possession of any manufacturer or dealer in the commonwealth and for this purpose may remove them to such place as he may deem most convenient. If any thermometer is found to be incorrect he is empowered to condemn, seize and destroy it. The director is authorized to prescribe rules and regulations governing the manufacture and sale of clinical thermometers and may authorize sealing by the manufacturer thereof who agrees to conform to such rules and regulations and files a surety bond in such amount and upon such conditions as the director may require. The director is authorized to revoke the authority given by him to any manufacturer who does not conform to the rules and regulations.

"Any person offering or exposing for sale, or selling a clinical thermometer which has not been sealed or certified as correct by the director or by the manufacturer is liable to a fine not exceeding $10 for each thermometer so sold, or kept, offered or exposed for sale. Whoever violates any rule or regulation prescribed by the director is punishable by a fine of not more than fifty dollars.

"The wisdom and necessity of this legislation is clearly shown by the fact that inspection and test of 4,564 thermometers bearing the manufacturer's seal-mark resulted in the suspension or revocation of the right to use the seal-mark in the case of five of the manufacturers involved, they being thereafter required to submit all thermometers to this office for test and certification before selling or offering them for sale in this state. Through such action future purchasers of clinical thermometers in this state may be reasonably certain of procuring safe and accurate instruments."

Following is a record of the tests upon which the suspensions and revocations were based:

Tested, 4,564. Passed, 2,306. Rejected, 2,258, or 49.4%.

Laboratory Tests of Thermometers.

Accurate	7,428
Inaccurate	4,301
Broken when received or during test	157
Total submitted	11,886

THE NEW SANTO TOMAS HOSPITAL, PANAMA, R. P.

By EDGAR A. BOCOCK, M.D., Major, Medical Corps, U. S. A., Superintendent, City of Panama

THE present Santo Tomas hospital, which according to all available records is the oldest institution of its kind in the new world, is located at the intersection of 16th and B streets in the city of Panama, the capital and largest city of the republic.

This location is in the center of the noisest and dirtiest part of the town. Just in front of the main entrance to the hospital, the tramway line makes a short curve, so that with the passing of each street-car a terrific noise is produced; automobiles passing in both directions constantly honk, while street dealers with push carts shout their wares on all sides. During carnival and other festivals the constant din from the streets around the hospital is terrific and has a very bad effect on the many patients who are quartered in the wards near the streets. Owing to the location of the hospital buildings in the center of the city on a rather low level, the heat from adjacent structures is intense. The present buildings are old, inadequate and irregularly arranged, owing to the original date of their construction, as well as the fact that new additions have been built from time to time, thus making the whole group an admirable fire trap during the dry season. Also, owing to the poor arrangement, wooden construction, and age of many of the buildings, it is absolutely impossible to maintain the desired cleanliness and modern sanitary conditions which present day hospitals demand. In view of these conditions, it has always been extremely desirable to remove the Santo Tomas Hospital from its present location to some other more suitable site about the city.

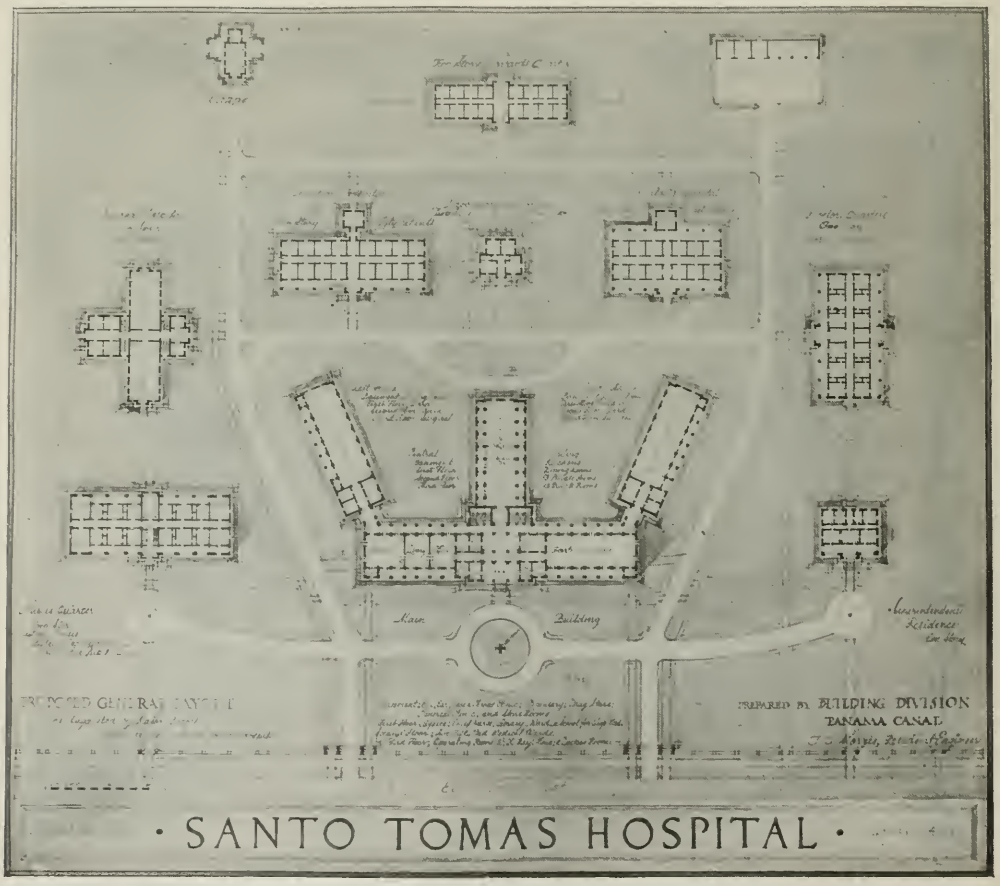
For several years the government of the Republic of Panama has contemplated the construction of a new and modern hospital to be a national institution and to replace the present old and inadequate Santo Tomas Hospital, whose defects have been already described. Owing, however, to financial difficulties, governmental changes and other obstacles, it has never been possible to make this wonderful project a reality until the year 1919. Some time before that date, special legislation had been passed by the national assembly appropriating a part of the revenue derived from the liquor tariff and the national lottery for the construction of the new hospital, and this fund at the time was accumulating at the rate of approximately $25,000 per month and about $250,000 was already available in the treasury

The Spanish type of architecture, which characterizes the twelve buildings of the new Santo Tomas hospital, may be noted to advantage from this view of the main building (right) as seen from the interior of the quadrangle.

for the purpose. With this amount of money on hand and with the prospects of a steady income for an indefinite time, it was decided to commence the construction of the new hospital immediately.

Several sites around the city were investigated, such as El Cangrejo, Perejil and the Bella Vista tract lying to the left of the suburbanized part of Bella Vista. On account of the high prices at which the land mentioned was valued and for other reasons, it was finally decided to use the site known as El Hatillo property which belonged to the national government. El Hatillo is located on the south side of the city and within one mile of the center of the business district. It adjoins the exposition grounds, lying between them and the ocean and forms a part of one of the most attractive suburban residential sections of Panama. While located sufficiently far away from the city to avoid the heat, noise and dirt, it is convenient to the street car line and the principal thoroughfares, thereby affording easy access to the hospital. The site selected had for many years been used as rock quarry with the consequence that in contour it was extremely rough and irregular and it was very apparent at the beginning that to grade and prepare the location for the buildings would be an expensive proposition. Otherwise, the location selected was extremely desirable since it fronts directly on the Pacific Ocean.

From the wide veranda which will surround the main building of the new hospital can be seen the Santa Rita mountains about thirty miles away down the coast of Panama, the great canal winding its way across the isthmus, "dividing the land and uniting the world," while the beautiful islands of Taboga, Taboguilla, Naos and Flamenco, heavily fortified by the coast artillery of



The layout of the new Santo Tomas hospital, now practically complete, which will replace the historic old building.

the United States army lie on the right of the view. From the position of the hospital a panoramic view of the Bay of Panama, the coast line with its environs for nearly ten miles, can be obtained. This magnificent view of the Pacific combined with the balmy summer days and cool refreshing nights, which prevail in this locality, should combine in a remarkable manner to conduce the rapid recovery of the patients who will be admitted to the new Santo Tomas hospital.

After preparing the outlay for the hospital, the building commission decided that it would construct the most modern institution of the kind in Central or South America. Of course, it was realized that the funds available were limited and should be used judiciously, but it was considered advisable to plan a model institution, furnished with the best equipment that was obtainable and to work toward that end, even if difficulties were encountered, on the assumption that once begun, the way would open up for satisfactory progress as the construction advanced. It was also felt that, since the new institution was to be the national hospital of the republic and at the same time a hospital that would assume a position of international prominence in Latin America and in fact in the entire medical world, it should be planned and built in a manner consistent with the position that it would eventually occupy. With this policy regarding the new institution settled and with approximately $250,000 in the bank available for use, work commenced.

In the beginning it was roughly estimated that the new hospital should cost approximately $600,000, but owing to the extremely high prices of building materials, as well as the grading and filling, it was soon found that the original estimate would not be sufficient to more than commence the actual construction of the group of hospital buildings. Preparatory work alone has cost about $400,000 and the seawall, which is being constructed at the present time and which is absolutely necessary to control the high tides, will cost about $150,000 additional. Thus practically all the funds that were originally estimated to complete the entire hospital will be expended. The present estimate of the cost of the hospital, exclusive of the proposed Gorgas Memorial Institue of Tropical Medicine and Public Health which is expected to be built in connection with it, is approximately $1,800,000 or about $2,000,000 if the institute is included. This estimate is made to include a complete outfit of modern and first-class equipment throughout the entire institution.

The operating room occupies the center of the patio. From ten to eighteen operations are performed here daily.

Santo Tomas hospital, built in 1696, is believed to be the oldest institution of its kind in the new world.

The kind of hospital that was determined to be best adapted to local conditions was a modified pavilion type, consisting of a main building in which will be located the major part of the activities of the hospital and which will be surrounded by a suitable number of separate sections for the care of special diseases that, on account of their prevalence in this country, warrant a special building. This type of hospital was believed to fulfill the requirements of centralization of administration, economy and efficiency in operation and practicability for the care of patients in the best possible manner. The capacity of the new hospital is to be 750 beds, and allowing for future growth of the population, to be ample in size to care for 900 patients, if such expansion ever becomes necessary. This bed capacity was based on the average number of patients treated yearly in the old Santo Tomas hospital during the past ten years with a certain allowance for the increase of patients, which will undoubtedly follow after the new institution has been completed.

The layout of the new hospital covers fourteen acres of ground or about nine ordinary size city blocks and is being located just along the beach of the Pacific. As will be seen from the photographs, the layout is bounded on the north by 37th Street, which extends to the sea front, and on the south by the Grand Via that as yet has not been entirely completed through to the sea. It will also be noted that a two-way boulevard is being built along the sea shore just inside the seawall. It is contemplated at some later date to extend this boulevard along the sea front to Panama, one mile distant.

Twelve Buildings in Quadrangle

The buildings that are being constructed will be twelve in number and are planned to be arranged in the form of a quadrangle with the magnificent main building and its annexes occupying the center of the frontage and flanked on either side by the doctors' and nurses' quarters, the maternity and venereal sections being farther to the rear, while the isolation, laboratory and tuberculosis sections will be situated immediately behind the annexes of the main building. The Gorgas Memorial Institute will be located to the right of the other hospital buildings in the block just behind the new British Legation, while the chapel, employes' quarters, shops, garage and other utility buildings, will be situated at appropriate places to the rear of the main buildings.

Four acres lying between the front of the main building and the Malecon will be occupied by ornamental gardens filled with tropical shrubbery and flowers, with a fountain in the center of the middle block. Immediately in front of the entrance to the main building and forming a center of a circular driveway, will be placed a concrete flag pole, seventy feet in height. The vacant spaces lying between the rear of the hospital and First Avenue will be utilized for vegetables gardens, since the soil in this locality is very productive and well adapted to grow native as well as foreign vegetables and fruits. The entire layout will be linked together by a mesh-work of streets and sidewalks which will offer easy access for transportation of patients and materials to all parts of the grounds. The buildings will be constructed of reinforced concrete and concrete blocks, and the streets will be of concrete with an asphalt surface. The entire layout will be surrounded by palm trees, with hedges of hybiscus forming a border to all the principal streets and walks and tropical flowers interspersed in such a manner as to form most beautiful and attractive grounds.

A woman's surgical section at Santo Tomas has accommodations for 100 patients. Adjoining are the nurses' quarters.

Plan of the Main Building

The main building of the new hospital will be five stories in height, 240 feet in length, 50 feet wide, and connected with three annexes or sections of the same height, each 109 feet long and 47 feet wide. Its normal capacity will be 433 patients in addition to housing all of the general utilities of the hospital. In the basement floor will be located the admitting office, which will be entered directly from the street on the south end of the building. Immediately adjacent to the admitting office are the dispensary with three examination and treatment rooms, a dental clinic and small laboratory. In the center of the basement floor is located the patient's clothing locker room, while under the front portico is the clothing disinfector for the entire hospital. In the north end of this floor of the building is located the linen department, where all counting, storing, sorting and mending are done. This section is connected with all wards of the main building by means of a clothes chute, which will convey all soiled linen directly to the laundry room.

In the basement floor of the left wing is located the eye, ear, and throat clinic with its examination and treatment rooms, while at the extreme end of this wing is the pharmacy and medical supply department of the hospital. In the center wing are located the main kitchen, main diet kitchen, bakery, refrigerating rooms and dietitian's and steward's offices. In connection with the refrigerating plant, ample provisions have been made for the storage of meats, perishable vegetables and the manufacture of ice cream. In the right wing of the basement floor are located the graduate and pupil nurses dining rooms with necessary serving rooms, a complete hydro- and electro-therapeutic department while the store rooms and supply department for the hospital are at the extreme end of the wing.

Fifty pupil nurses from Panama make up the student body of the only training school for nurses in Central America.

On the first floor which is entered from a large and spacious portico surmounted by four Corinthian columns is the main foyer. Cheerfulness is the keynote of this room and as the patient enters it he will find at his convenience, information clerk, chief nurse, superintendent and the business office. There are in connection with the administration suite a spacious library, board room, and a school of student nurses. In the main part of this floor there is located a medical ward of twenty-eight beds for male patients. In the left wing is located a similar ward of twenty-eight beds for female patients. The center wing is devoted to the main dining rooms for the patients with serving rooms and dumbwaiter service from the main kitchen. The right wing is given to a medical ward of twenty-eight beds for men. All parts of the building above the ground floor have large spacious screened porches.

The second floor is devoted entirely to wards with their diet kitchens, examination rooms, utility rooms, and linen closets. There are two medical wards of twenty-eight beds each for men, two medical wards of twenty-eight beds each for women and one prison ward of thirty beds with four cell rooms. The prison ward is so situated as to be entirely separate from the rest of the floor having its own service section.

The main part of the third floor is given to twenty semi-private rooms each of which have clothes closets and running water. In the left wing is a surgical ward of twenty-eight beds for women; in the center wing a children's ward of thirty beds; and in the right wing a surgical ward of twenty-eight beds for men.

The fourth floor has in the main portion twenty-five private rooms. The majority of these rooms have private baths and are so arranged that they can be thrown into suites of from two to five rooms when desired. With the addition of the large porch facing the sea and the high altitude this is easily the best location in the entire building. The center wing is devoted to the operating suite which consists of two major operating rooms, two minor operating rooms, a large sterilizing room, a nurses' work room, doctors' scrub-up, anesthetizing rooms, dressing and rest rooms for doctors and nurses.

The x-ray department is also in this wing and includes two operating rooms, plate examination room and a dark room for developing work. A dressing room and store room for the suite complete this section. In the right wing is a surgical ward of twenty-eight beds for men.

The tuberculosis section is a two-story building, 120x40 feet in size, of reinforced concrete construction and hollow block walls having a red Spanish tile roof. There are large screened porches on both sides of the building giving the patients ample room for recreation when not con-

fined to their beds. The building is located directly in the rear of the main building and faces the sea.

The first floor is devoted to eight private rooms with toilets, locker room for patient's clothing, diet kitchen, a dining room and utility rooms. The section nurse's office is on this floor near the main entrance as well as the doctor's office and examination room. There are private toilet rooms for both the doctor and section nurse.

The second floor entrance to which is gained by a large stairway at each end of the front veranda is devoted to two wards of 17 beds each. The nurses' station and diet kitchen are located midway between the two wards making the service combined. There are also toilet rooms, utility room and a dining room on this floor.

In design, size and construction the isolation building is largely the same as the tuberculosis building and is so arranged as to meet the requirements of a contagious disease department.

Sixty beds in the building divided into sections accommodate at least eight different diseases. The sections vary in size from two to ten beds each, each section having its own toilet, bath and utility room.

On the first floor near the entrance is located the office of the section nurse of the building, also the admitting section which consists of doctor's office, examination room, and a receiving room with bath. There is a main diet kitchen on each floor connected by dumbwaiter service. The porches are also screened off giving each section a portion for the patients when not confined to their beds. There is a large sterilizing room and locker room on the first floor.

With its walls of reinforced concrete and its red-tiled roofs the maternity section resembles in general style other buildings in the group. This section cares for approximately 125 deliveries monthly.

The venereal building is a two-story building, "T" shaped, 170 feet across the front with an extreme depth of 78 feet, of reinforced concrete construction, hollow block walls and red Spanish title roof. The first floor is devoted entirely to the treatment of men, having a complete examination and treatment department in the center of the building near the entrance.

There is a section nurse's office, private toilet rooms, and supply room in close connection with the examination suite. Two wards contain 19 beds each, one located on each side of the patio which is directly in the center of the building. The patio is 30x15 feet in size and is so arranged as to form an outlet for patients who are not confined to their beds.

In the rear portion of the building there are four private rooms, a four-bed ward, a locker room, toilet room, main diet kitchen, and dining room. The building has large screened porches on both front and rear.

The second floor is identical in arrangement to the first with the exception that it is devoted entirely to the treatment of women.

In design, size and construction the maternity building is similar to the venereal building. Arrangement of rooms, and wards is practically the same with the exception of the examination section which is arranged to meet the requirements of this building. The delivery section is on the second floor and consists of two delivery rooms, sterilizing room, examination room, quiet room and the necessary utility rooms needed in this section. This building has a capacity of 90 beds.

The laboratory is also a two-story building adequate in size to care for all the work of the hospital and at the same time to perform the functions of a board of health laboratory for the republic. This building will contain in addition a morgue, autopsy room and crematory.

Modern equipment and facilities will be installed throughout the new institution. Sound proof walls, silent bell call system, floor night lights and inclosed clothes chutes are being used in each one of the buildings.

The entire fifth floor of the center wing of the main building will be devoted to the surgical and x-ray suites and the equipment of these departments will be entirely modern in every way. A radium department will be a feature of the surgical suite and hydro- and electro-therapeutic rooms and equipment will be located in the basement floor.

Appliances and accessories for use in equipping the new hospital will all be purchased in the United States and abroad and when finished the Santo Tomas Hospital will undoubtedly be one of the most modern, thoroughly equipped and finest institutions of its kind south of the United States.

THE SMALL COMMUNITY HOSPITAL*

By OLOF Z. CERVIN of Cervin & Horn, Architects, Rock Island, Ill.

IN AN article in a preceding issue on the small community hospital some general considerations in planning were made and emphasis was given to the need of centralization so as to minimize the walking distance of the nurse in giving service to patient. It has been estimated that a nurse will walk from four to five miles a day when on duty; if 20 per cent of this distance can be eliminated, she will naturally be able to take care of more patients with the same effort.

This article might well start with emphasis on centralization. Fig. I illustrates how it can be achieved. The elevator, the nurses' station, the stairs, the x-ray room, and the entrance to the operating suite are all grouped together. The diet kitchen and the nurses' utility room are close to the stairs; next come the general toilets and bath. The balcony is over the ambulance entrance on the main floor and close to this entrance is an emergency operating room.

Fig. I also illustrates an operating suite. This is so arranged that the sterilizing room will serve both the delivery room and the operating room.

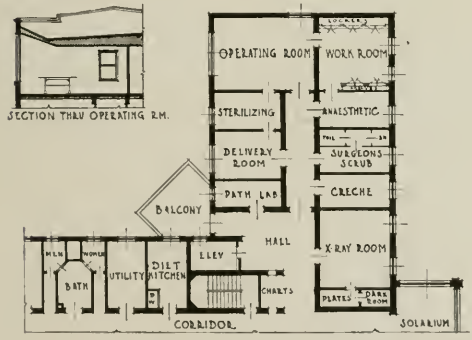


Fig. 1. Operating suite and service arrangement.

The nurses are given a large work room with table and liberal storage capacity in wall cases. It is well to have the dressing sterilizer in or very near the work room. The pathological laboratory is located nearby for convenience in rapid diagnosis of tissues before completing the operation. The x-ray room is on this floor rather than in the basement so as to avoid dampness. The space allotted is about the minimum: a word of warning to avoid making the x-ray room so small as to be a constant annoyance should be heeded. It should have convenient a dark room and a plate storage room. The dark room should be lead lined to keep the x-rays from spoiling the contents. This room need be convenient to the elevator for out-patient use.

Lighting the Operating Room

The cross section of the operating room in the same figure shows an economical method of lighting which should have more publicity. This does away with the standard skylight involving first cost and upkeep, as well as probability of leakage. The window is made unusually high, the ceiling being inclined up about three feet; the resulting angle of the ceiling is such that the light reflected from the ground will again be reflected to the operating table. The window should be double glazed. This arrangement is no longer an experiment and is being used in the east as well as in the middle west.

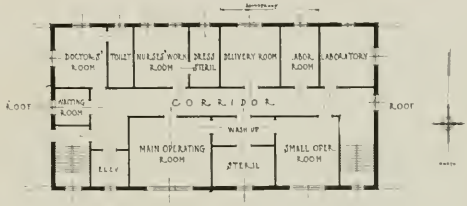


Fig. 2. Upper story of operating suite.

A better arrangement for an operating suite is shown in Fig. II, where it is located in a story above the rest of the building and free on all sides. This gives more privacy and makes the exterior interesting. It is, however, expensive both in initial cost and upkeep. The plan provides

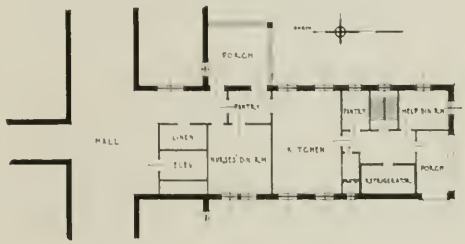


Fig. 3. Kitchen arrangement.

*Article I on The Small Community Hospital appeared on page 225 of the March issue.

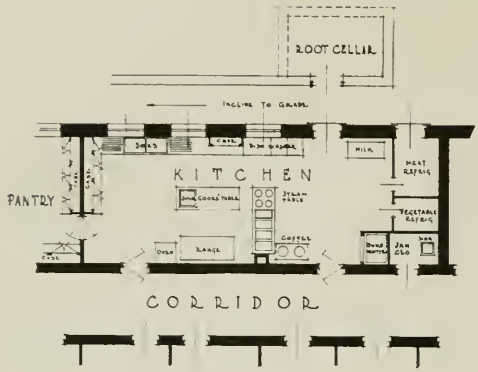


Fig. 4. Detailed kitchen layout.

greater operating facilities, a waiting room for friends of the patients and a labor room next to the delivery room. The delivery and labor room should be sound-proofed with special doors, double windows, and insulated partitions. The x-ray laboratory is located elsewhere. Fixed equipment in the operating room should be the minimum. Some doctors banish sinks and even floor drains, vent ducts and registers, the better to maintain a sanitary condition. There should be the best type of electric operating light fixtures in the ceiling and side outlets for local lights, fans and emergencies, including gas outlets. A surgeons' lavatory and a slop sink should be placed close by. The nurses' work room requires a large table, an abundance of shelving and lockers and a washup lavatory. The doctors' toilet requires lockers, washup lavatory, water closet and shower. Whether it is a good practice in a small hospital to provide a special room for anesthetizing may well be questioned. It would appear that most doctors now prefer to have the anaesthetic administered in the operating room itself. The delivery room should have a supply case and a washup sink and should be almost as well lighted as the operating room. The creche or baby room should have a special infants' wash sink with gravity flow of water, automatically tempered, a compartment case with a division for each infant's supplies and shelf for the cribs. Equipment in the sterilizing room can be reduced to the minimum of a hot and cold water outfit and an instrument sterilizer provided the dressing sterilizer is located in or near the nurses' work room and a utensil sterilizer is provided in the nurses' utility.

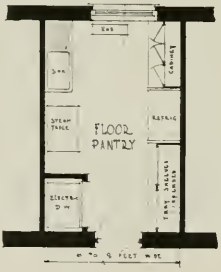


Fig. 5. Typical floor pantry.

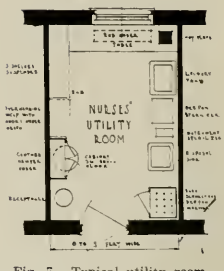


Fig. 7. Typical utility room.

If the kitchen can be arranged as in Fig. III with air and light on two sides, it is fine indeed. Economy will probably dictate some arrangement similar to Fig. IV, which gives in detail the location of various necessary fixtures including a mechanical dishwasher and an oven. The range is for gas or coal as circumstances dictate. Opposite the entrance and across the incline is a root cellar which will be found convenient where potatoes and other vegetables are bought in large quantities. The refrigerator is divided into two parts, one for meats and one for vegetables. Milk should be kept in an ice box made for the purpose. Large store rooms for kitchen supplies should be located as close to kitchen as possible.

Diet kitchens or floor pantries should be placed above each other and the main kitchen and should have dumb waiter connection electrically controlled if possible. Whether these kitchens need be large enough for the preparation of meals or whether the meals should be sent up on trays is a problem for each superintendent to decide. A typical floor pantry is illustrated in Fig. V which has steam table, sink, cabinet, refrigerator and suspended shelves for food trays. The plan shows the width from eight to nine feet. Eight

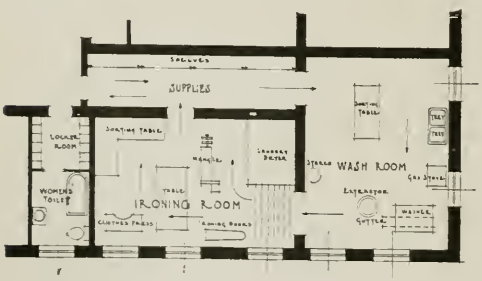


Fig. 6. Laundry arrangement.

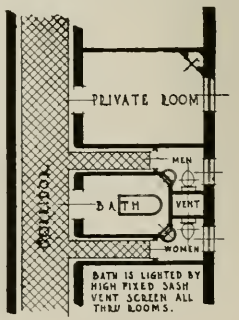


Fig. 8. Toilet and bath.

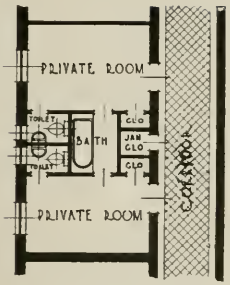


Fig. 9. Economical toilet arrangement for private rooms.

feet should be considered a minimum.

There should be a laundry if possible. Fig. VI shows one plan, the arrows indicating the routing. First comes the receiving room with shelving for supplies. This leads into the wash room with two standard laundry trays, a gas stove and starch cooker, a washer and an extractor. The clothes then go into the dryer in the ironing room. Here is a mangle, an ironing board, a press and a sorting table close to the exit to the hospital. Power washers should be free from any belt drive on the ceiling as the vibration is apt to disturb the sick.

The one room of utmost importance is the nurses' utility which requires great care in equipping (Fig. VII). There should be in this room a bed pan and blanket warmer, a disposal sink, and instrument sterilizer, a bed pan sterilizer, a laundry tray, a table with gas plate, shelving for various kinds of apparatus, a shelf with hooks underneath, place for a laundry hamper and a red cross receptacle. It is better to discard the clothes chute entirely unless funds permit the installation of one of enameled iron, arranged for thorough and easy flushing.

Toilets for men and for women should be provided on each floor, and there should be a general bathroom distinct from these. Many methods of placing toilets and bath to provide proper segregation with the maximum of economy have been tried. An arrangement is shown, Fig. VIII, where one vent shaft and one plumbing stack will serve toilets for both men and women and a combination bathroom, and will separate completely all three. Experience has shown this to be thoroughly practical. One general bathtub serves as many patients as the two toilets. Two tubs would be uneconomical in space and plumbing fixtures. The high priced private room should have its own toilet and wash basin and in some cases a bath. However, as a bath is not in great demand in a hospital, it can be arranged as shown in Fig. IX between two rooms with independent toilet and clothes closets in connection. The bath may be lighted by high windows in the partition. An arrangement without the bath, somewhat simplified and yet quite popular, provides a toilet in common between two rooms, each room supplied with its own wash basin. (Fig. X.)

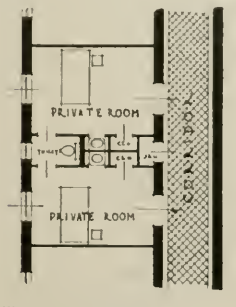


Fig. 10. Typical private room and toilet arrangement.

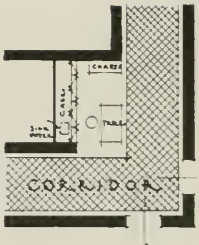


Fig. 11. Nurses' station.

It is desirable in each private room to provide a hat and coat closet. The ordinary square or rectangular closet, it is often found, projects into the room, spoils it appearance, and interferes with the arrangement of furniture. Fig. XI is the plan of closet made by cutting off a corner. This closet is small but sufficient for most needs. The floor is kept up to the height of the sanitary base for ease of cleaning; all corners are rounded.

Two plans of the nurses' station are shown. In Fig. XI it is located in the corner of the halls. This space is usually difficult to utilize. Here is a telephone, a rack for records, a special case for poison with lock and key, a table top of white glass with lockers under and a case with drawers over a small sink. Another type is shown in Fig. XII where the station is close to the linen rooms, this plan is especially suited for long straight halls.

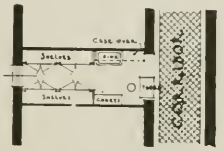


Fig. 12. Nurses' station.

Some small community hospitals will require an out-patient department, and it would be well if more hospitals had them. Fig. XIII illustrates the necessary separate entrance, the dispensary with a room for the pharmacist and stairway to basement supplies, the general waiting room with settees, tables and information desk, the doctors' offices with a special arrangement for eye, ear, nose and throat treatment, the medical library

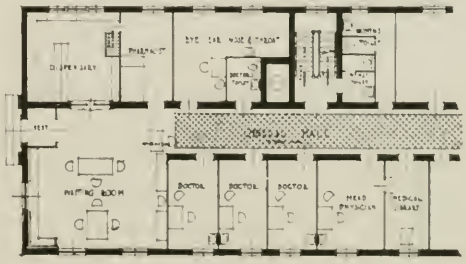


Fig. 13. Out-patients' department.

and separate toilets for doctors and for men and women.

Mention should be made of some other rooms frequently overlooked. There should be near the ironing room, or in or near the linen room, space for sewing, with electric outlet for a sewing machine. Hospital plans should not overlook a room for storage of screens and storm windows, as well as space for a vacuum cleaner, and for repair work, a room for wheel chairs, beds, and other large pieces of furniture, and a room for hospital records.

Only a word as to material. Brick will in most cases be found the best material for the exterior. Hard burned vitrified and light colored, the modern brick is both inexpensive and attractive. Hospital builders have for many years experimented with floors, all things considered, including price, a well laid and well kept terrazzo floor in rooms, halls, and stairs will give the best service. If linoleum runways are laid in the halls these will allow greater quiet as the hard plaster necessary in hospitals, the absence of hangings, the small amount of wood and the freedom from beams and other breaks tend to make them noisy. It is advisable to use as little wood finish as possible and to have all surfaces smooth with the least number of projections requiring cleaning and dusting. It goes without saying that all plaster corners and angles should be rounded.

The hospital board also will have to consider the decorations, as few people are satisfied to spend night and day in a room with bare white walls. The color scheme should be kept as light and cheerful as possible; a simple artistic stencil near the ceiling will help rather than disturb the average patient. Cream, buff and light yellow are the best colors for north rooms, and French gray or light green for sunny rooms. Blue and pink should be avoided. To use high colors, like red, to any extent is a serious mistake. If used at all, let it be sparingly.

SOME PRINCIPLES OF HOSPITAL STANDARDIZATION

By JOHN G. BOWMAN, Chancellor, University of Pittsburgh

THE American Conference on Hospital Service was created, among other things, to increase cooperation among medical and hospital societies, to prevent waste and to put an end to duplication of effort. That was three years ago. The purposes did not seem very thrilling. And yet as we look back now over the three years some thrilling results stand out. Cooperation and good will are a reality; the possibility of duplication is gone; and, best of all, it is now unthinkable that in a spirit of rivalry or self-advancement one society could enter another's field of endeavor.

"The hospital is at one and the same time a practical, a scientific and a moral institution. The idea of the hospital as a center of powerful morality, stripped of all thin sentiment, is one which we must keep strongly forward in standardization. Whenever hospital service detects human illness and relieves it, the service is essentially moral. Further, the idea of happiness is not separable from the practical transmission of good. The sum total of a sound program of hospital standardization is, then, that it carries forward and tends to complete the life-equation of the individual practically, scientifically and morally. It fuses happiness into the day's work so that work is an inspiration.

The Conference has accomplished more than we thought possible. But how was it done, for the Conference has shown little initiative? The answer is that Dr. Frank Billings took the headship of the Conference. That fact alone has kept the members of the Conference on their best behavior. We are in the habit of being good. All of us are much in debt to Dr. Billings.

But to get to my subject, the principles of hospital standardization, which was assigned to me by Dr. Billings. The subject means, if we are to deal with it here in a practical way, a consideration, first, of what we want in hospital service, and second, of the means to get what we want. Both of these considerations require that we have a basis upon which to observe, to select and to put our intelligence into action in such a way that an ideal hospital service advances in an orderly manner toward reality. The principles of hospital standardization are the summaries of common sense which permit foresight of right service.

Aim of Standardization

But foresight is an elusive thing: In a program of hospital betterment it implies, as just stated, the perception of an ideal hospital service, and this must be a practical outgrowth of existing hospital conditions. It seems to be plain sense therefore that we should make clear to ourselves at the start the principles or basic assump-

tions through which hospitals have come to their present conditions and through which they may seek further progress. Some of these principles are as follows:

1. The aim of hospital standardization must lie within the purposes which the hospitals have consciously set for themselves. If the dominant purpose of hospitals is to provide for the sick or injured the best care known to medicine, then the aim of hospital standardization must be to provide the best possible care for the sick or injured. To put the matter in another way, let us suppose that you, representing one or more medical societies, choose a program of hospital standardization which is foreign to existing purposes of hospitals; and that, for example, your program consists of research in bio-physics. Such a program is defeated at the start. It is defeated because, lying outside of the purposes of hospitals, an aim like this amounts to arbitrary dictation from those outside of the hospital to those inside of the hospital. It fails to relate what they *ought to do* with what they *desire to do* and is therefore a futile program. Research in bio-physics, however valuable it may be to medicine, is not now included by hospitals as an essential in the right care of patients; and until it is perceived as a means to such an end it will be a foreign issue and an impracticable issue in hospital standardization. It lies outside of the purposes which the hospitals have set for themselves. Unless the program impels consecutive action which is the expression of the mind in foresight, it can not succeed.

Program Must be Flexible

2. But granted now that your program lies inside of the purposes of hospitals, the next principle which arises is that that program must be flexible. The influence of scientific research during the last twenty-five years upon our ways of progress is here a helpful thing. It has brought home to us the value of a mind flexible in its action. Under this influence rules of conduct and rules of administration have given way to principles; and principles are now giving way to understanding. All action in the hospital should complete, or carry on toward completion, service in the proper care of patients. Such a process cannot be formulated into a set of rules. It must not be a rigid process. If the initiative of those working in a hospital is to be kept alive, the free play of their intelligence must also be kept alive. This means, first, that the objective, the mark for future attainment must be clear, or, let me say, radiant. It means, second, that the mark for future attainment must influence or suggest each action in the hospital; that each action is related to the mark. It means, third, that in this process of attainment to the mark a constant series of alternatives will necessarily arise which call for judgment. The free play of intelligence is forced into action. If results now strike closer and closer to the mark, nothing more is required. The flexibility of the program is the basis of incentive, of happiness in work and of success.

3. While the aim of any successful program of hospital standardization must be flexible and must allow the free choice of alternatives to the individual, the individual must nevertheless be accountable for the intelligence of his actions or for his failures to act. The accumulated experience of the medical profession indicates treatments, operations or techniques, which have proved to be most sound. For understanding of this experience the doctor is accountable—accountable to his own conscience, to the medical profession and to the society whose trust he holds. In the treatment of patients there is no place for the trial of luck, for guesses, for laxness and laziness, for unintelligent enthusiasm or for mere aspiration. An intelligent doctor has the power to perceive the present conditions of his patient and to refer those conditions to probable consequences. Otherwise he is unfit to be trusted. He is accountable for his capacity to act and for his actions.

To summarize these three points which, as it seems to me, are essential in any sound program of hospital standardization: First, the purposes of the program must lie within the purposes which the hospitals have already made their own. Second, the program must be flexible, permitting free action and free play of intelligence, the guide being not a set of rules but a mark for future attainment. Third, the program must require responsibility and accountability on the part of each individual privileged to take part in the program.

If now these points seem too obvious to need review, let me call your attention to the fact that years ago the following subjects were seriously suggested for inclusion in a national program of hospital standardization: Financial accounting; uniform nomenclature; post-mortem examinations; the education of patients in the hospital; the hospital library; the testing of materials before purchase; and the means of financial support. While all of these subjects are of interest to the hospitals, the extent to which they are appropriate for a real program of standardization may be tested by the foregoing principles.

But to return now to the matter of responsibility. Here we have the very heart of the practical problem of hospital progress. The hospitals were created by society. They were created at first merely as convenient centers for the care of

the sick or injured. Then, especially in recent years, society came to realize that medicine outdoes in human value all other professions. The idea grew that hospitals are the apparatus of the medical profession for the production of happiness, the relief of pain and the cure and prevention of illness and injury. Then, further to the credit of the medical profession, the idea grew that hospitals are accountable to the public for the right care of every man, woman, and child admitted as a patient.

Important reasons for this modern conception of the hospital seem to be:

1. More numerous and varied interests which society assumes today in the control of business enterprises. The business man now participates in many interests and in so doing has learned to refer his own actions to others and to accept responsibility for others. A keener sense of the responsibility on the part of hospital trustees and of doctors for the character of service in hospitals is therefore natural.

2. Workmen's compensation laws have brought into public review the effectiveness or ineffectiveness of much medical service and have stimulated among hospitals the sense of responsibility. For example, one-third of the applicants for state compensation last year in New York State, I am informed, presented histories of wound infection. Were these infections unavoidable? Were some of them due to carelessness or to ignorance of proper treatment? Surely the hospitals in which these cases were treated are under obligation to know the answers to these questions. They are under obligation to create conditions in which they can answer such questions with pride if such conditions do not now exist.

3. The advance of the science of medicine in the last quarter of a century has created a wide and natural discrepancy in the training and skill among doctors. The individual who becomes ill or injured and who at least suspects the range of competence in the profession desires some check upon his selection of a doctor for his need. His desire that the hospital serve as a guarantee of the service he is to receive is natural and reasonable. An analysis of 3,000 cases of fracture of the femur recently disclosed that only ninety of these cases recovered with a ten per cent or less disability. Is the medical profession content with these findings? How is the man or woman with a fractured femur to find the most skilled treatment? The answer to this question lies in the organization of hospitals the staffs of which respectively bring their combined intelligence to bear upon every case where the need is indicated. By this step the medical profession makes a more vital contact with the public than ever before.

In the idea, then, that the hospital is both responsible and accountable for the care of its patients, let me repeat, we have the heart of standardization. The regular staff meeting with its review of work done, adequate laboratory service, and the keeping of case records are merely the machinery through which the hospital accepts its responsibility and checks up on its performance. In all of the program the doctors are in control. Principles only, or the mark of attainment, are insisted upon. All such matters as the open hospital or the closed hospital are for each individual hospital to settle.

In conclusion let me say that hospital standardization is an educative process and that as such it is all one with a moral process. Whenever service in a hospital detects human illness and relieves that illness, the service is essentially *moral.* It is the transmission of good. But the service is also a scientific process. When the doctor in his day's work realizes that the application of medical science is the transmission of good and that it is therefore the very substance of morality; when he realizes that in his work the practical and the ideal are fused, he has come into his own.

The hospital is at one and the same time a practical, a scientific and a moral institution. The idea of the hospital as a center of powerful morality, stripped of all thin sentiment, is one which we must keep strongly forward in standardization. Further, the idea of happiness is not separable from the practical transmission of good. The sum total of a sound program of hospital standardization is, then, that it carries forward and tends to complete the life-equation of the individual practically, scientifically and morally. It fuses happiness into the day's work in such a way that work itself becomes an inspiration.

DIRECTOR OF UNIVERSITY HOSPITALS

The appointment of Dr. L. S. Schmitt of San Francisco as director of the University of California Hospitals has recently been announced. Dr. Schmitt is acting as dean of the University of California Medical School, the university hospital being the teaching hospital for the school. The educational institution also owns the Hahnemann Hospital in San Francisco which maintains both a private and a public service, the latter being mainly for industrial cases. The University Medical School is further affiliated with St. Luke's Hospital and the Children's Hospital in San Francisco.

"I do not believe in any philanthropy which is not in fact what the word means—the love of man. But the knowledge of a man must go before the love for him—acquaintance, friendship, love can only come from sympathy and a close and accurate knowledge of the ways, the habits, the lives of the poor—not a mere sentiment, but an active and fruitful enthusiasm."—Florence Nightingale.

INSTITUTIONAL FARMS AND GARDENS

By WALTER E. WRIGHT, Assistant Director, The Burke Foundation, White Plains, N. Y.

MANAGERS of new institutions and of established ones which are situated in open country or have unused land areas repeatedly bring up the question of more gardening or general farming upon their plots. The proposals, usually made by new members, appear enticing and it is often wondered why the superintendent and others with experience advise delay or caution in the matter.

A recent collection of figures, general statements and personal opinions from those in charge of twelve institutional gardens and farms within our fifty-mile radius leads to the conclusion that they average an actual slight to moderate loss over a series of years. In most instances the agricultural accounts are not accurately kept, and precise incomes and expenditures are with difficulty separated from the general running expenses mainly because of the intricate, and proper, interactions with the other activities. The larger state insane and custodial places are not included in this study, but scanning and just interpretation of their reports will disclose surprisingly narrow margins of farm profit or loss, even though they are favored with abundant free or part-free labor.

Certain general facts partly clear the problem in the beginning. Small private farming on the average and under the favoring conditions of home-group and long-hour help yields good livings only, with but scant, if any, net income; most institutions in question are located suburban to cities and are wholly under the influences of high wages, high cost of material, short hours and the accepted inefficiencies of this environment; the soil available is apt to be "run-out." "Plant-enemy" and the various neighborhood depredations are here at their height. The rapid subsidence of the "war-garden" effort applies here; many factors have of course caused this, but the main one is that it didn't pay. The people are not slow to stop a money loss, nor in further developing a clearly profitable work near at hand. New managers of institutions who so often propose to "grow their own vegetables and save much expense" are measurably mistaken.

Gains Outside of Money Profit

Why, then, do the older places continue to conduct gardens and general farming? Because of definite gains other than money-profit. Should new country health institutions, large or small, plan some tillage of their land? Yes; and mainly for the following reasons: "vegetables from our own garden," the "pure milk of our dairy," etc., are phrases back of assured values and mean advancement for the institution; the sight and feeling of an abundance of these particular products induces in practice a better balance of institutional diet, as noted especially in the light of the newer food facts (cheaper vitamines, etc.); employes, too, appreciate the combinations and are more contented; a balanced amount of this land culture makes feasible a better staff for house and grounds care and the many intermediate duties. (Details of many advantageous "help" combinations, extending from garage and stable through land-care into heating plant and house service, will suggest themselves.) Tillage gives charm and finish to the neighborhood as compared with unkempt areas, and supporters of the

Cardiac adolescents under supervision are strengthened and group-trained by garden work.

A group of stronger, hungrier boys returning from their work at the convalescent farm.

establishment like to see it in such full-rounded adaptation; tax exemption not infrequently hinges upon the full or part use of the property for the charitable and remedial purposes, and good-feeling may be upbuilt by gifts of surplus product in season to neighboring charitable organizations.

Women patients, especially those who are nervous or depressed, are helped by outdoor occupational exercises.

But of more importance, perhaps, than any of these is the occupational and mental therapy which farm and garden may furnish wherever the patients are convalescent or but partially handicapped, physically or mentally.

Farm Labor Proves Good Therapy

It is not practicable to try to present accounting figures of the institutions in the present inquiry, further than as summarized in the beginning. A very large private hospital for mental diseases, having a long-established organization with large acreage, reported profits one year and losses another, one made first claims of big profits which analysis mainly dissipated (a common error); milk production in the larger plants seemed to present most general satisfaction. Each place has found by experience a suitable ratio of garden to other activities, and none would quit the procedure because the sure auxiliary advantages outlined above outweigh moderate monetary losses.

The Burke Foundation's Convalescent Home, maintaining 300 patients and 100 employes upon a sixty-acre plot has, after seven years' experiment and fairly accurate accounting, settled to a ten-acre farm-garden with no live stock. Monetary profit of a few hundred dollars per year is figured for the whole period, but this fails to take account of the various depreciations, insurance, etc. Value of the yearly product has been from $3,000 to $5,000; about one-third of all the fruits and vegetables used are thus supplied. The organization has been simplified until one head has charge of the garage, gardens and grounds. The obstacles to precise garden accounting are well illustrated here by the frequent changes of men and horses from garden to lawn-care, to transportation of patients and supplies, etc. Many patients working moderately one or two hours per day have benefitted health but not farm expenses to any extent; a part-pay occupation for some as they gain strength has proved good mental and physical therapy only.

Dietitian and Gardener Must Cooperate

Kinds of crops raised will depend upon land, labor, possible interacting organization and equipment, and the appetites and needs of the particular patients accommodated. A list for this zone may be approximated: lettuce, sweet-corn, onion, radish, tomato, carrot, turnip, parsnip, parsley, cabbage, celery, rhubarb. Potatoes are best bought unless exceptional conditions obtain. Asparagus, strawberries, etc., may come into favorable schemes. The technique does not always closely follow that of the market gardener but aims to arrange crops so that horse can do most of the work, the labor-cost being ever paramount in suburban environment. Artificial fertilizer is used freely in lieu of cheap barnyard manure; plowing under fertilizer crops is worth-while at times.

A very common cause of dissatisfaction and partial failure is lack of hearty and painstaking

Patients' farm occupation, if well supervised, aids in convalescence. Extra protective clothing is needed.

cooperation between dietitian and gardener, resulting in wrong plantings and crop rotations, surplusage, kitchen waste, expensive seasonal lacks, and at times unbalanced diets; someone placed over those in charge of each section obviates this. We concur heartily with the institutions canvassed in saying that we would continue the gardens even at a moderate financial loss for the sake of the health and contentment and sentimental gains accruing thereby, as indicated previously.

THE VALUE OF POST-MORTEM EXAMINATIONS AND METHODS OF OBTAINING THEM

By E. M. BLUESTONE, M.D., Assistant Director, Mount Sinai Hospital, New York

BROADLY speaking, no hospital is larger than its pathological laboratory. According to modern standards, the ability of a hospital to cope successfully with the clinical problems which its patients present is measured by its interest in the laboratory phases of disease. We refer to the laboratory spirit in the widest application of the term, and one which embraces the idea of the clinic as a place where the study of disease is carried on in the form of continuous research with the ultimate purpose of preventing every pathological entity under the sun. The quintessence of this spirit is in that part of the laboratory in which clinical failures —and, rightly looked at, every death is a clinical failure—are checked up, and where every autopsy performed carries a moral as well as a scientific lesson for the medical idealist.

"The administration of a hospital, I cannot repeat too strongly, should have a well defined clinical point of view. Its eagerness to keep faith with those who die by a process of carefully checking up the failures of the clinic should measure its value to the community. There are many psychologic aspects to this business of asking consent for post-mortem examinations, but every case must be regarded as a problem in itself. We must expect that a large number of requests will be refused, but if they have been handled properly, no hospital need admit failure in these cases. If a negative reply is accompanied by an appreciation of the merits of our appeal we win."

A hospital in which the laboratory is relegated to a small room where a few perfunctory routine "bloods" and "urines" are done is no larger than that room because of its helplessness in the handling of cases which are not of the classical textbook type. The progressiveness of a hospital is in direct ratio to the laboratory spirit which it maintains, but a hospital of this routine type must follow blindly the teachings which arise elsewhere. It cannot lead. It is, therefore, no exaggeration to say that waste of clinical material in which the hospital has failed to cure is, from a broadly human point of view, morally wrong. The fact that discoveries in the realm of medicine and surgery are not in proportion to the amount of available clinical material is striking and calls for serious thinking. It is time to stir the clinical conscience of the profession.

Death Means Medical Failure

When a patient dies from any cause, except possibly old age—and old age is another medical world that is still to be conquered—medical science confesses failure. The fact that we have not yet mastered certain diseases does not alter our contention of failure. With this as our major premise we proceed with the argument that the hospital is under a moral obligation in all cases to make every reasonable effort to determine the exact cause of death. Since "facts are the trump cards in the great game of science," the method must be one of direct observation of pathologic processes and not a species of guess work which is the outcome of an ultra-vivid clinical imagination. At the present time Bacon's remark that the medical sciences are more professed than labored still holds true. Failure in one case should bring a reinforced sense of our responsibility toward the next case.

In the course of our plea for consent to perform post-mortem examinations, we are frequently confronted with the argument that the case in point is not the first or only one of its kind and that many others have suffered similarly. But we hold that no two cases are exactly alike, and that even if they were alike, the necessity of establishing a logical series of cases with similar pathologic findings is an important consideration. The diagnosis being known, where is the cure? No finding is considered too small. Every increment to our knowledge of abnormal processes is important, if this wonderful human machine is to be engineered properly through life. And we may further ask if only those deaths must be investigated which occur in patients who are friendless. Is not the unknown soldier in the battle of life entitled to as much consideration as he whom fortune favors? All who serve the living after death are doing nobly; we should educate ourselves to believe this and to cry it from the housetops. We should teach at every opportunity that it is a great human service to sign consent for post-mortem examination. The profession must accept the responsibility of helping to free the less enlightened mind of a few imaginary ogres and hobgoblins. To the intelligent

relative of the deceased, superstition may perhaps best be described biologically as a survival. Is not the body consigned to the earth, where its fate is of much less consequence to those who might be benefited by an honest inquiry into the cause of the Great Tragedy?

Ethical Standards Far Behind Microscope

Coroners are instructed in the interests of the community to autopsy cases in which the cause of death is "unusual or suspicious." One may well wonder how this responsibility ought to be interpreted. What, for example, are its limitations? We may properly ask whether the human family in our country may not be legislated into a state of affairs such as already obtains in certain European states to which American physicians flock in order to learn pathology. Lawmakers have occasion to substitute compulsory legislation for voluntary education, where less grave dangers threaten, as for example, in preventing the traffic in poisonous drugs. Constitutions are happily subject to amendment. It is one of the endless tragedies of our civilization that our ethical standards are thousands of years behind the microscope. There is a certain fatality in our refusal to grasp opportunities. What will the judgment of future generations be when they look back on some of the superstitions of the present time?

In pleading for permission to perform post-mortem examinations we must possess a certain amount of confidence in our ability to learn from a given case, and we must, therefore, start with the assumption that we can find the cause or, if the diagnosis was reasonably sure before death, a cure for the particular disease from which the patient unfortunately died. In many instances we fail because we still lack instruments of sufficient precision or because of our inability for various other reasons to correlate certain pathologic changes. We may not find the cause or cure the first time, but our efforts are justified by virtue of the fact that we add to our fund of knowledge with every case, and success must be sure if we persevere. The history of medicine furnishes abundant proof of this contention.

The philosophy which underlies the post-mortem examination must, however, be clear to the progressive medical mind. Kingsley's remark that science is its own reward is self-evident. Unfortunately, one meets in medical circles, too, with sentiment and superstition combined to produce a truly medieval state of mind. I have a very clear recollection of one family physician on whose advice much depended, but whose mental eye "would not react to either light or accommodation." To many, autopsy means desecration and mutilation, and with these the utmost gentleness and sincerity of purpose are required to bring about a change of mind.

The time for asking consent of the family must be judged in each individual case. The majority of our cases respond better to an appeal of this sort on the morning after the patient died, when the edge of their grief has had time to become dulled. The feelings of the family are hurt least when their minds have had an opportunity to become adjusted to their loss. In a few instances we have succeeded in getting consent ante-mortem, when the near relative, in the presence of suffering, was in a generous mood toward his environment, but these were mostly wound inspections in surgical cases.

In starting an appeal for post-mortem examination, the near relative (and the choice of the most intelligent near relative, where this is possible, is of the utmost importance) must be convinced that the hospital which cared for the patient did everything in its power to save his life. We frequently point to the chart as mute evidence to prove the magnitude of the hospital effort. The volume of the history, the entries by men of high standing in the medical community (and every educated doctor in the community who gives freely of his time and knowledge to relieve the suffering of the poor is, strictly speaking, of high standing), the large number of laboratory examinations performed (and in private practice these are very expensive), the tender care of the nursing staff, all point to the fact that the hospital left no stone unturned in an effort to save him who died. These points are brought home in a kindly spirit of sympathy, and it is well to remember that if the request is not made sincerely and wholeheartedly, one might as well save his breath. In no case is anger or an impatient attitude justified. The right to refuse consent is, after all, inalienable, and from a much broader standpoint a negative reply may be of great value, if the reasons for our plea are made clear. We have been told by relatives again and again that our reasons were appreciated, but. . . . It must be kept in mind that a family antagonized is a source of danger to the progressive hospital spirit in the community. Our effort must be continuous. "Truth is like a ship whose prow will cut through the waters of falsehood, but will not prevent them gathering in its wake," if we may be permitted a quotation from Goethe.

There must be thorough coordination of the clinical and administrative organizations of the hospital and the greatest amount of tact and strategy in handling what is undoubtedly a very delicate situation. We frequently call upon the house physician or surgeon to initiate the argument, and

the disinterested representative of the administration or the social service department, both of whom have previously given every evidence to the bereaved family of their interest, steps in at the crucial moment. Every individual must be judged apart and with a keen recollection of former experience. Different types of mind require different forms of approach, and the whole affair is an interesting though somewhat trying problem in psychology. Upon the solution of this problem depends, in a large measure, the future of pathology.

After the preliminary steps of winning the confidence of the spokesman for the family, it is pointed out that by a careful post-mortem study of the case it may be possible in the future to spare others in similar circumstances the same pain which the patient suffered and which the family now endures. To spare the feelings of the family, words like "autopsy," "cut," "knife," and "organs" should be studiously avoided. Instead we ask for a "post-mortem examination," an "opening," etc. The impression which we try to create should be an ideal one. The body opens up before our gaze, and the diagnosis made (sometimes from a small section of the cancer) or the cure found (occasionally by a vaccine to be prepared from the pus, the presence of which was previously suspected) closes up again, having revealed the clinical mystery and conferring, perhaps, untold benefits on future generations. We try to stir generous impulses by a careful discussion of the humanitarian aspects of the case. The responsible relative convinced, it is important to get prompt signature before other members of the family appear to raise fresh obstacles. There is danger in numbers because one stubborn individual may upset the best of plans. It is a hopeful sign that one rarely sees a family in which all the members object to post-mortem examination.

Doctor Nearest Case Should Put Request

Whenever possible the house physician or surgeon should be required to obtain consent and should have the universal encouragement of all elements in the hospital. There is a great deal of value, aside from the momentary success which may attend his efforts, in giving the physician who is nearest the case an opportunity to convince the family of the justice and wisdom of his request. Hippocrates might have made this a condition to his time-honored oath. And the ability to convince may, for obvious reasons, be taken as an index of the future success of the doctor in the community. It is a measure of his medical idealism at least.

Two cardinal humanitarian arguments used frequently in our hospital may here be given. When a variety of other forms of persuasion fails, we ask how would he decide who has just passed away if he were not given the opportunity to speak. If he were assured that others could be spared the same pain and suffering which he has just experienced by an examination of his body, what would he say? Here is another. If a brother of him who died were, unfortunately, to fall a victim of the same disease, and if the saving of his life depended on what could be learned from a post-mortem examination of the lifeless body, how would the family decide? And if the answer is in the affirmative for his own brother, why not for some one else's brother? There are always a number of similar cases on the wards which might be benefited by this generous act. One never knows who is next. It might be the one spoken to or his medical interlocutor. We should tell relatives that our duty as honest physicians does not end with the death of a patient, but that it really begins toward the next man who knocks at our doors for relief. We do not want to stand helplessly by the bedside of the next case as we did in this. Just why did death end the unequal struggle? To the more enlightened mind, the argument that if a negative answer were the rule medicine would still be in the Dark Ages appeals, and here we may dilate on the achievements of modern medicine.

Occasionally we exhibit permission slips as evidence of what others have done in similar unusual cases or tell of what other intelligent people have done who were generous enough to be governed by purely humanitarian motives. We are attempting here to lay down general principles for the guidance of those who would seek consent for autopsy and all arguments given require elaboration. The number of successes depends, in a large measure, on how much the hospital understands the mental makeup of its own patients and their relatives. We have already said that it is the duty of the hospital to ask. The clinical conscience thus awakened, the lay conscience may be expected to fall in line.

Partial Autopsies More Easily Obtained

Complete autopsies are always desirable, but partial autopsies frequently are satisfactory to the clinician and are much more readily obtainable. An abdominal incision in medical cases or a wound inspection in surgical cases thus teaches as much as an autopsy if performed properly. And when the request is made, we must be sure not to exaggerate the extent of the examination. Gentleness is an indispensable prerequisite to success. The fact that we are not asking for a complete autopsy must be carefully impressed on the

family. We desire only the sort of incision that is sometimes made in an operation for appendicitis, the kind that would have been made during life if operation had offered any hope of a cure. In surgical cases we ask permission to reopen a wound already permanently present. The wound is carefully closed after examination, and leaves a cleaner line of closure than if the wound had been left gaping with several drainage tubes in place. The pathologist must cooperate by bringing about as nice a cosmetic result as possible. For the sake of the embalmer, whose help we may look for in future cases, all important vessels are tied off. The undertaker should be consulted about the proper way of doing this, as well as about other matters relating to the disposal of the body, and it is important to apologize to him whenever any delay in his activities is brought about. Unfortunately for the pathologist, the business of undertaking is subject to the rules of commerce. Friendly undertakers have helped us to obtain consent when they were convinced of our desire to cooperate. Conscientiousness in the autopsy room is important, if we are to be sincere in our considerateness for the feelings of the family.

When the undertaker looms large in the negotiations, the method of procrastination should be used with great care. Yet we have succeeded on several occasions in winning consent where all other arguments failed, when we told the family that some of the professors (every attending physician or surgeon in certain sections of the community is called "professor") had expressed the desire to meet them personally in order to make sure that the entire matter was made clear to them. The doctors who attended the patient in his last illness are entitled to this courtesy, it is admitted. Occasionally a note from the attending to the house physician asking him in the name of all that is human to place the whole matter frankly to the family is exhibited with beneficial results.

Religious Objections Easily Overcome

We find in our hospital that objections on religious grounds are surprisingly few and those presented easily overcome. Mount Sinai Hospital has many Jewish patients, yet we have been fortunate enough to obtain consent for partial or complete post-mortem examination in about 270 deaths during the year 1921. This figure represents 56 per cent of all ward deaths, excluding coroner's cases. In other words, we were unable to explain 44 per cent of our deaths except by indirect evidence. This figure represented our scientific deficit for the year. During the six month period beginning March, 1921, consent was obtained in 64 per cent of the cases, and we regard this as the more representative figure, since it does not embrace the period in which the organization for this special purpose was being developed. In one series of 100 consecutive deaths we obtained consent in seventy, and in another series fifty out of sixty-eight.

Religious objections are not difficult to refute. To our knowledge there is no religious law which forbids autopsy where a definite step forward in our understanding of disease can result. Rabbis and priests have told us so. It is important to bear in mind that there are few cases, if any, in which some gain that will benefit the next sufferer is not made at autopsy. Father Moulinier, president of the Catholic Hospital Association, in his address at the hospital conference of the American College of Surgeons on the standardization program, said, "Thirteen deaths in the past month mean nothing. Why did each one die? So many unimproved in the hospital mean nothing. Why are they unimproved? What has been the use of the laboratory? Why haven't we had more autopsies?" Religion to the more intelligent has a broader aspect, and it is fair to start our plea with the assumption that the family is free from superstition.

To those who are pious an occasional quotation is justified. "Though I give my body to be burned and have not charity it profiteth me nothing." To the much less enlightened mind and one that believes in a hereafter the scene of Judgment Day may be evoked in a telling manner when the relative is asked how he will make answer to his God for refusing consent to a step which will bring relief to his brother who is in pain. If the man hesitates "for conscience' sake" we ask what sin he thinks himself committing—is there not something religious in the feeling of pleasure which the opportunity to serve thus should give?

I recall the story of an intelligent middle-aged woman who was said to have promised her dying brother that no autopsy would be performed on his body. The office was informed of the futility of argument. But we had a great deal of faith in the intelligence of the sister and decided to make an effort. Most of the arguments here enumerated were presented, and we then asked what would be the decision if the dead could speak. Was not the patient's mind clouded toward the end and beset with groundless fears? How would he have decided in his clearer moments, fine fellow that he was? He had suffered for months, would he give himself now that it was all over? Must we by her refusal again stand helpless by the bedside of the next sufferer? If she could project herself into the future, how would she decide one year from now when her mind had become accustomed to her loss? The pathologists

little knew the effort made in this instance. Consent was given, and I am anxious to record that when the sister signed we felt we were in the presence of the most generous spirit in the world.

Always on Verge of Great Discovery

To return to the body of our theme, we should remember that in every case we are, theoretically at least, on the verge of a great discovery. The history of science justifies such optimism. In the course of our plea it might be stated that if the patient had died of pneumonia, we would possibly have refrained from asking for post-mortem examination, since the pathology of this disease is supposedly understood. And if the case happens to be one of pneumonia, the request may be made on the ground that most cases of this type get well. Why then did this one die? The pathology and bacteriology of pneumonia are by no means closed chapters, and this disease is still "Captain of the Men of Death."

The "blood-disease" argument, where heredity may play a part, or the plea of communicability in certain cases, frequently brings results. We must prevent other members of the family from contracting the same disease. It may be possible to start treatment in time with the next victim, so that a recurrence of the tragedy may thus be avoided. It is important in all events to tell the relative who signs consent that he will be expected to return after a reasonable time to learn just what was the cause of death. In an appeal of this nature such an invitation will win the confidence of the family.

Every Case a Problem in Itself

There are many more psychologic aspects to this business of asking consent for post-mortem examination, but every case must be regarded as a problem in itself. We have tried in these few notes to lay down basic principles and to set a standard. For the rest, every hospital organization must decide for itself. An ideal state does not exist at present, it is something to which we may look forward. But I cannot repeat too strongly that the administration of a hospital should have a well defined clinical point of view. Its eagerness to keep faith with those who die by a process of carefully checking up the failures of the clinic should measure its value to the community. We must expect that a large number of requests will be refused, but handled properly, no hospital need admit failure in these cases. If a negative reply is accompanied by an appreciation of the merits of our appeal we win. And Charles James Fox, the gambling English statesman, has said that next to the joy of winning is the joy of losing.

PENNSYLVANIA HOSPITALS NOW UNDER UNIFORM ACCOUNTING SYSTEM

A uniform accounting system for all state hospitals and those that receive state aid has been announced for Pennsylvania by Dr. John M. Baldy, commissioner of the department of public welfare. With the adoption of the system on March 1, Pennsylvania lays claim to the distinction of being the first state in the union to have uniformity in its hospital accounts.

Under the new plan sectarian institutions may receive state aid without violating the provisions of the constitution prohibiting the appropriation of state funds to such institutions. If there is a fixed price for service the state can purchase it from a sectarian institution just as it may go into the open market and buy supplies from the lowest bidder, regardless of his religious affiliations.

The working out of the new system, it is said, will mean that the state can ascertain the exact amount it should pay a given institution on the basis of the number of charity and part-pay patients. All hospitals in making reports, in place of listing gross expenditures including interest on borrowed money, must give the exact amounts disbursed for charity patients. Through such means it will not only be legal but feasible to make payments to sectarian institutions proportionate to the amount of charity work accomplished.

The act which created the Pennsylvania department of public welfare placed on the commissioner of that department the responsibility of recommending to the general assembly the amount of appropriation for each institution. A first essential in an intelligent plan of making these recommendations was a uniform system of accounting, Dr. Baldy believed.

The general scheme of accounting proposed by the Committee on Uniform Records and Reports of the American Hospital Association was closely adhered to in Dr. Baldy's scheme. Adoption of that scheme in its entirety was impossible in the state of Pennsylvania, owing to certain requirements of the auditor general's department. It was therefore deemed advisable by the department of public welfare to adopt for the hospital accounting system the general method of accounting well established in the normal schools of that state.

Printed record forms in a substantial loose-leaf binder are furnished free of charge to each hospital.

The new system is said to be meeting with the favor of hospital superintendents. Eventually the same general accounting scheme will be introduced into the mental hospitals and homes of Pennsylvania, it is declared.

BRUSHES GREET NEW SUPERINTENDENT

New superintendents in a number of hospitals have been receiving a large shipment of brushes from a New York manufacturing firm soon after they have assumed their executive duties. The more wary of these administrators have consulted the order sheets of their predecessors before accepting the shipment and have found, in most cases, that no such order had been placed. Warning is being sent by them to others in the field.

Pure wine, bathing, fomentation, venesection and purging, those five, were the remedies prescribed for those suffering with pain in the eyes by Hippocrates, "prince of physicians." Their relative order of importance is stressed by the Greek in a later work in which he says: "In pains in the eyes, after having prescribed the use of good wine, and of frequent warm collyria, we are to bleed."

PROBLEMS OF NOISE IN HOSPITALS AND HOW TO MEET THEM

By LAURENCE C. HART, S. B., Chicago.

How a quiet, almost oppressive, has succeeded the excessive noise that formerly disturbed patients at Mount Sinai Hospital in Cleveland is told in the accompanying article by Mr. Laurence C. Hart, of Chicago. The installation of a sanitary acoustical felt about ceilings and upper walls has made even the continual rumble of street cars unnoticeable to patients, while the organization among staff members and personnel known as The Society for the Prevention of Unnecessary Noise has partially eliminated noise from human sources. The laws of physics governing sound are stated and on the basis of these Mr. Hart explains methods of sound absorption which have proved successful.

IN VIEW of the increasing trend of professional thought covering hospital construction and operation, toward greater comfort for public and private patients, consideration must be had for mental as well as physical requirements. In the case of the latter extreme care is taken in providing cleanliness, sanitation, asepsis, proper ventilation and heating, wholesome and appetizing food. The mental comfort and welfare of patients are largely dependent upon a general quiet condition within the hospital building.

The whole development of building construction and building materials during the past twenty-five years has been in the direction of poor acoustics and, consequently, more noisy buildings have resulted. This is particularly noticeable in the evolution of the modern hospital building, where three main considerations demanded by public safety and health have had a radical influence on the choice of materials and the mode of construction—namely fire protection, sanitation and durability.

These demands have naturally led to the almost exclusive use of steel, concrete, tile and hard plaster, with a minimum of wood finish, steel often being used not only for trim but for furniture and equipment. The inevitable result has been an unbearable increase in noise, confusion and nervous excitement all of which have had a marked effect on the state of mind and personal comfort of patients. Actual fatigue of the nerves is engendered similar to muscular fatigue after physical exercise. This vitally affects the well-being of patients and in many cases offers a distinct handicap to prompt recovery from illness.

Sources of Disturbance

Ordinances are passed providing for "zones of quiet" in the vicinity of city hospitals. Such ordinances are not well observed, only indifferently so even under ideal conditions. More important is it to provide quiet conditions within the immediate confines of the hospital rooms and corridors. It is this last problem which is herein discussed.

In diagnosing the ailment, let us consider first, the cause; second, the effect; and third, the remedy.

Many sources of troublesome noise in a hospital contribute to discomfort. It is necessary to mention only a few examples, such as elevators, elevator doors, telephones, visitors, corridor doors, rattling dishes, conversation and general confusion in the handling of equipment, to say nothing of adjacent street noises. Such noises, following the recognized physical laws governing sound, are propagated largely through the atmosphere or open spaces, but also through floors, ceilings, partitions and structural building members. The problem of sound transmission through walls, floors and ceilings is greatly simplified by absorbing a large part of the sound energy near its source through the use of acoustical treatment. We shall, therefore, omit in this discussion the minor problems involved by sound transmission through structural members of the building.

Sound energy is propagated by means of spherical waves emanating from the source of sound as a center and passing through matter in the form of alternate pressure and rarefied pulsations. For each vibration of the sound source, there is one pressure wave and one rarefied wave. A vibrating object, therefore, such as a tuning fork, violin string or vocal chord, sends out a train of successive spherical waves. A plane section taken in any direction and passing through the point of the source of the sound energy would, therefore, reveal a series of concentric circles which submit themselves to scientific photography for analysis.

As we are discussing only that sound transmitted by means of the atmosphere within hospitals, rather than that transmitted through

structural members of the building, let us consider only the action of sound waves in a single medium, the air.

Any sound once generated within the confined space (room or corridor) of a hospital sets into action a train of spherical waves as described above, these sound waves traveling radially in all directions from the source. Such spherical waves travel at a uniform velocity of approximately 1,100 feet per second and are affected similarly upon coming into contact with any medium different in density from that of the air. For example, a sound wave upon meeting an obstacle such as a wall, floor or ceiling undergoes a transformation whereby its energy is distributed in three manners: it is partly transmitted through the obstacle, partly absorbed and partly reflected. This same transformation takes place for each of the successive waves in the series. The greater the density and the more impervious the obstacle, the greater the percentage of sound energy reflected. Especially is this so in a building of modern fireproof construction consisting of cement, marble, tile and hard patent plaster.

We are not concerned with the small amount of sound energy transmitted and absorbed, but we must attach great importance to the sound energy which is reflected because this reflected wave continues in opposite direction until it strikes another obstacle such as the opposite wall, the floor or the ceiling and the same transformation takes place again. This phenomenon continues until the residual sound energy is entirely dissipated. It should not be difficult to visualize the extreme degree of disturbance existing within a confined space between the time that the sound is generated and its energy entirely dissipated.

Method of Reducing Reverberation

A sound of ordinary intensity must be reduced to approximately one millionth of its original intensity before becoming inaudible. Sound waves lose only from two per cent to four per cent of their residual energy at each reflection from a surface of any modern building material, wood surfaces naturally absorbing at each reflection a larger percentage of the sound energy than hard plaster, cement, tile or marble surfaces. Therefore, several hundred reflections are necessary in order to entirely dissipate such audible sound. The period or time required for such energy reduction by multiple reflection of the sound waves results in the accumulation or piling up of the energy of successive sounds causing a vast increase in the general confusion and resultant discomfort. The rate of decay of this residual or accumulated noise is directly proportional to the amount and efficiency of sound-absorbing material present. The term applied to this condition of residual sound or accumulated noise is technically known as reverberation. Reverberation can be calculated in terms of seconds and is technically defined as the period of time required for a sound to become inaudible after the source of sound has ceased. The duration being inversely proportional to the amount and efficiency of the absorbing material present, it is therefore, necessary to increase absorption in order to eliminate reverberation.

Science has developed a method of reducing reverberation which employs the use of a clean and strictly sanitary acoustical felt. This material can be applied against the ceilings and upper wall surfaces of rooms and corridors in a workmanlike manner, covered with a smooth and tightly stretched membrane, treated with a sanitary solution which provides a splendid decorative appearance and at the same time allows for repeated cleaning and redecoration. This construction, which does not in any way alter the interior appearance of the rooms and corridors treated, serves to eliminate by prompt and effective sound absorption the excessive and troublesome noises which ordinarily cause so much confusion and discomfort.

Installation at a Cleveland Hospital

As a specific example of hospital welfare work along the lines discussed above, kindly permit us to describe the direct practical application of these principles in one of the most modern hospitals of the country, Mount Sinai Hospital of Cleveland, Ohio. This hospital is a three- and four-story building with wings on each side of a central corridor. It faces the busiest cross-town car line street in the city, where car service is almost continuous day and night. Many of the hospital's private rooms face this street and, with the windows open, the noise from the street was quite a factor in contributing to the discomfort of patients occupying these rooms. The corridors were naturally very noisy, being finished with hard plaster walls and ceilings.

Last year the hospital authorities, after a wide investigation into this form of acoustical and noise correction, arranged for the installation of this system in the Mount Sinai Hospital. It was installed within the following rooms:

Director's office, associate director's office, accounting office, principal's office, telephone exchange, lobbies and nurses' stations on three floors, corridors on three floors, two reception rooms, fifty-eight private rooms, twelve utility rooms throughout the institution, nine serving kitchens, a children's ward, isolation rooms,

a nursery, a labor room and delivery room.

In all of the above locations the sound-absorbing acoustical treatment was applied over entire ceiling areas. In the labor and delivery rooms, it was extended to the side and end wall surfaces. The results were so efficient as to make the treated rooms extremely quiet, almost approaching a dead silence. Needless to say, the authorities, doctors and nurses are extremely well pleased with the splendid results obtained throughout but the principal benefactors are, of course, the patients whose welfare the authorities are exerting every possible effort to safeguard.

Street Noises Pass Unnoticed

A few examples of the direct benefits experienced might be cited. In the private rooms the windows may now be opened wide and the extraneous noise from the street and surface cars is so quickly absorbed by the ceiling acoustical treatment that it does not force itself on one's consciousness. In like manner, the talking and walking of nurses, attendants and visitors in the corridors is now so deadened that with the exercise of reasonable care in eliminating unnecessary noise, a state of comfortable silence prevails. The noise incident to the rattle of dishes in the kitchens and utility rooms has been eliminated to such an extent as to permit doors, formerly closed at all times, to be left open without danger of annoyance to patients in adjacent rooms and wards.

In one instance the head nurse made the statement that after the corridors had been treated the degree of quiet was so marked as to be almost oppressive. Furthermore one of the patients who had been in a private room before the treatment was installed and who has been there again since the room was corrected has remarked that the difference is nothing less than extraordinary and that he was delighted with the quiet, soft quality of the room.

The above system of sound absorption or noise elimination is intended to serve as a cure, or remedy at least, for the necessary and unavoidable noises both interior and exterior. However there are in addition many minor precautions that can be taken, small details in themselves but considered in the aggregate very vital toward eliminating preventable noises. It might be well to enumerate some of these as practical suggestions to hospital administrators.

The noise of slamming doors is usually prevented by the use of automatic door-stops. Elevator sliding doors can also be provided with cushions or strips of piano felt to prevent the sound of the metallic impact when the doors are closed. In some hospitals, small lobbies or vestibules are located at all elevator entrances, these vestibules opening into the main corridors by swinging doors which serve somewhat as a barricade to elevator shaft noise.

In addition to the above concrete examples, there remains for consideration one very vital factor dependent for its success upon the human element; therefore it requires careful education of the hospital personnel.

Society for Prevention of Noise

In the Mount Sinai Hospital there has been organized among the members of the hospital staff "The Society for the Prevention of Unnecessary Noise." In line with this welfare work and as an assistance in the education of the hospital personnel, Mr. Frank E. Chapman, director, produces a series of bulletins designed to inculcate in the staff the principle of making as little unnecessary noise as possible. These bulletins are cleverly worded so as to attract the careful attention of all members. It is surprising to note the hundreds of apparently unimportant details in connection with hospital operation where contributing noises can be very easily eliminated with the exercise of ordinary and reasonable care. It is still more surprising to note the exceptionally satisfactory results that have been obtained in the aggregate from this campaign against unnecessary and preventable noises.

In conclusion, it is hoped that hospital staffs throughout the country will continue in their present endeavor to institute such campaigns both as relates to the operating personnel and to the proper equipment of hospitals with systems of sound absorption. The total results of such campaigns are bound greatly to improve general hospital conditions as well as individually to benefit patients. It is a very important form of welfare work requiring the careful thought and sincere consideration of hospital staffs.

LIBRARY SERVICE AT ROBERT LONG

So successful has been the public library service recently instituted at the Indianapolis City Hospital that Robert E. Neff, administrator of the Robert Long Hospital in that city, has requested an extension of the service to include that institution. Miss Lucile McCray, daughter of Governor Warren T. McCray, will be in charge of the library service at Robert Long Hospital. The Indianapolis Public Library inaugurated its book service at the city hospital last December.

DIETITIAN LEAVES SOUTHERN HOSPITAL

Miss Carolyn S. Kling, formerly chief dietitian of the University of Virginia Hospital at Charlottesville, was recently appointed chief dietitian of the Grace Hospital in Detroit and has introduced into all the departments there the serving of hot food from portable steam tables constructed on the thermos plan.

A NEW VENTURE IN SANATORIUM MANAGEMENT

By GEORGE THOMAS PALMER, M.D., Medical Director Palmer Tuberculosis Sanatoria, Springfield, Ill.

THE creation of tuberculosis sanatoriums has constituted one of the most interesting and, within the past two decades, one of the most spectacular and rapidly moving chapters in the entire history of hospital development.

For many years institutions for consumptives have existed; but there has been a steady and in recent years a rapid change in their policies and methods. Originally the hospital for consumptives was something of an asylum for incurables with all the morbid and depressing atmosphere which this term suggests. Conditions prevailing in these institutions were tempered and modified by the intelligence and vision of Dettweiler, Brehmer and other pioneers; but nevertheless they remained merely improved asylums for the hopelessly sick.

Recognition of the infectiousness of tuberculosis and the confirmation of that theory by Koch brought about radical changes in hospitals for consumptives, placing them on a more scientific foundation perhaps, but improving the condition of the patients very little if at all. From 1882 with the discovery of the tubercle bacillus, we witnessed the development of what may be described as the "pest house type" of sanatorium in which fear of contagion appears to have been the dominant factor in the guidance of architectural design, equipment and institutional management. Scattered throughout the United States today, there still remain specimens of institutions established when the tubercle bacillus was in the ascendancy,—cold, severe structures possessing little more possibility for creature comfort than the surgical operating room, the mausoleum or the morgue.

Thought Turned Wholly to Early Cases

Following demonstrations by Trudeau as to the curability of early or moderately advanced tuberculosis through various modifications of out-of-door life, there came about a vigorous movement for the establishment of institutions for "incipient cases" with a consequent neglect of the more advanced patients.

The impracticability and injustice of confining our institutions entirely to the treatment of early cases were soon demonstrated and the more progressive sanatoriums, earnestly seeking to serve their communities, adopted a broader policy and began receiving all classes of cases. This step was taken with the idea that the earlier cases could be arrested or cured; the more advanced patients could be given comfortable asylum under conditions not too depressing until death relieved them; and, in the meantime the interests of the public health would be conserved by removing open and infectious cases from homes and communities.

For a time, with this broadened policy, many sanatoriums originally constructed for the open air treatment of early cases imposed unwarranted hardships upon the more acutely sick by housing them on open porches and exposing them to severe weather and other trying conditions. It became recognized after a time, however, that there must be provided distinct hospital facilities for the sick consumptive in which he could receive special medical and surgical attention and comfortable bedside care.

Within very recent years, and only within very recent years, has there come about a wholesome change in our attitude towards the advanced patient. The success of artificial pneumothorax and

The hospital department, known as "The Homestead," is located within the town and treats those with active and surgical tuberculosis.

of other bolder surgical procedures, when used discreetly, has suggested the opening of a great field of surgical or other active treatment of tuberculous disease with a correspondingly brighter outlook for the advanced patient, until our present standards require that every complete tuberculosis sanatorium, in addition to quarters for the open air treatment of earlier cases, must also have quarters for hospital patients and reasonable provisions for surgical work.

Mingling of Various Stages Objectionable

The reception of incipient, moderately advanced, advanced and surgical consumptives, particularly in the smaller institution, has led to an unfortunate mingling of patients which is distinctly objectionable. The objectionable feature of this

mingling of all classes of patients, however, does not lie so much in the possible depression of the less acutely sick by such incidents as occasional severe hemorrhage or even death among the sicker patients. These were the bugaboos of the sanatoriums of a decade or two ago. As a matter of fact, one of the most difficult things in the management of the early consumptive is to keep in his mind a wholesome respect for the seriousness of tuberculosis and a definite fear of the consequences of his indiscretions. The occurrence of a hemorrhage due to an unwise act or even an occasional death, if intelligently handled, will serve as an object lesson of distinct and definite value. Association with advanced cases, so long as the balance between early and active cases is intelligently maintained and the distribution of patients is wise, does not have the depressing effect upon the incipient patient with which it has been credited.

There are other considerations however of more genuine importance. The general methods and plans of handling acutely sick consumptives and the early tuberculous are as different as the provisions for treating two entirely different types of disease, and it is practically impossible to provide entirely satisfactory conditions for both classes in any one small sanatorium. The advanced or surgical consumptive should have the quiet and the general environment and conditions of a well conducted general hospital in which provisions for out-of-door life are of secondary importance. There should be very little coming and going and the amusements and diversions which are provided should be even-toned and in no way exciting. The psychology of the advanced consumptive, with its characteristic optimism, is conducive to this quiet and uneventful course of life.

The early tuberculous patient, on the other hand, requires entirely different surroundings. He should have a thoroughly cheerful and homelike atmosphere with freedom of movement when not contra-indicated by his physical condition. He should have ample amusements and diversions and such as are likely to be objectionable to the acutely sick. He may rejoice in the blare of a brass band and is not upset by the mechanical din of a player piano. He must not be depressed by the presence of the acutely sick any more than the acutely sick should be disturbed by the natural effervescence and activity of the convalescent. It is to be borne in mind that the stay in a tuberculosis sanatorium is one of months and years and not of weeks or days as in the general hospital.

Division of Two Classes of Patients

In view of these conditions and with the rapid development of chest surgery and the promise which this holds out to very sick consumptives, it became obvious to me, after an experience of six years in the Springfield Open Air Colony, that there would be a distinct advantage in having a small, well regulated hospital for active and surgical cases and a sanatorium for early and convalescent cases, the two institutions to be located on entirely separate grounds, but under one medical, nursing and business administration, with records and personnel interchangeable as conditions might require.

In the outskirts of town is the open air colony, a sanatorium and school for the treatment of early tuberculosis.

The hospital department of the institution was then established and was located in the residence section of the city within ten blocks of the business center, conveniently within reach of the medical staff and convenient to the members of the patient's families at all hours of the day and night. In this institution a definite hospital atmosphere is maintained without the diversions and activities to which incipient patients are entitled, but which would prove distinctly disturbing to patients undergoing surgical treatments.

This hospital is employed for the reception of patients, for the study of doubtful cases, for the care of advanced bed-ridden patients, for the treatment of serious complications and for the employment of surgical procedures.

The sanatorium department for earlier and convalescent patients is situated in the outskirts of the town with grounds amply large for graduated exercise and for amusements under supervision. The atmosphere is that of a cheerful country home and not that of a hospital. There is little depression to avoid the disturbances of others and the patient is taught to live as nearly as possible under the conditions which will surround him on return to his own home. In addition, the colony is made rather than a medical institution a school of instruction in right living, in academic branches and in useful and entertaining arts and crafts.

Two years have passed since the plan was put in operation and we are now able to compare the benefits of actual practice with those of theory. On the whole, the venture has been successful

and with certain modifications suggests a solution for many of the problems which have developed in the rapidly changing policies of sanatorium management.

Practical Benefits of Plan

1. By complete separation of the institutions. the atmosphere and method of living may be entirely different and entirely appropriate to the two classes of patients.

2. One relatively small unit has the expensive construction and equipment of a general hospital, while the sanatorium unit has the simple and inexpensive construction and equipment suitable for convalescent patients.

3. The patient is "graduated" from the atmosphere of the hospital to the homelike conditions of the sanatorium before discharge to his own home, preparing him more intelligently for his future life.

4. The hospital, situated in the heart of the city, permits constant contact of the medical staff with the sicker patients, thereby guaranteeing infinitely better medical service. This downtown location also allows easy access for members of the patients' families day or night without the necessity of providing meals and quarters for these visitors within the institution.

5. Change from one institution to the other as the patient gradually improves gives relief from the monotony of the prolonged stay without the disrupting changes in methods and treatment usual in the change from one sanatorium to another.

To say that this plan, or any plan in the present undeveloped state of sanatorium design and operation, is not open to objections is of course absurd. While one general staff with medical director, attending physician, business manager, superintendent of nurses, accountant and clerical employes is able to care for both institutions, the servant and domestic problem is practically doubled. This has been somewhat compensated, however, by the fact that there are two complete domestic crews and nursing staffs. Domestic flare-ups, such as the walking out of groups of domestic servants, frequently so disturbing, have never occurred simultaneously in both institutions, making it possible to strengthen the crippled crew in one institution from the full crew in the other on an hour's notice. In one instance, when the entire kitchen crew in the sanatorium walked out immediately after luncheon, a full and fairly efficient crew was sent from the hospital in time to prepare a satisfactory dinner.

Increased overhead expense was, of course, to be expected even though the employes drawing the largest salaries serve the interests of both institutions. However the various advantages in service have more than compensated for increased costs and it has still remained possible, by careful business and administrative methods, to maintain exceedingly low rates and to make a safe margin of profit during shaky and uncertain times.

The most interesting obstacle to the complete carrying out of the original plan, and one which is not without its distinct value, lies in the patients themselves and their unwillingness to change from one institution to the other after having become comfortably and contently established. It had been anticipated that there might be some reluctance on the part of the patient in the sanatorium section to his being removed to the hospital section; but it had not been expected that the patients in the hospital section would object to removal to the sanatorium with its attractive rural environment and greater freedom of action. It was found however that there developed very early a friendly spirit of rivalry, not only among the patients but among the employes, a spirit incidentally which has gone far toward the elevation of the standards of service in both places.

With the steady development of the field of chest surgery in the treatment of pulmonary tuberculosis and with the more definite promise of recovery afforded the advanced patient, I am satisfied that this plan of organization will prove more and more attractive, particularly in the relatively small private institutions in which overhead cost and every other consideration can be made secondary to the character of professional service and the content and welfare of the patients.

DETROIT MAYOR DONATES MILLIONS TO CONSOLIDATED HOSPITALS

Amalgamation of the Michigan Hospital School for Crippled Children at Farmington and the Children's Free Hospital of Detroit, as proposed by Mayor James Couzens of Detroit some months ago when he agreed to donate from $1,000,000 to $5,000,000 to the institutions if brought under one head, has been completed. The hospital will be known as the Children's Hospital of Michigan. Mayor Couzens has been named president of the institution.

The Detroit chief executive agreed to donate $1,000,000 immediately after the two institutions were merged, which sum he announced he would increase to $5,000,000 as the institution required it. The hospital will be open free of charge to those children from all parts of the state whose parents cannot afford to pay. Those financially able will be compelled to pay for hospital service.

Tentative plans call for medical and surgical treatment at the Detroit hospital with the old hospital school as a convalescent home. The building at Farmington will be greatly enlarged to accommodate the expanded patronage.

The new hospital came officially into being on April 1.

Mrs. James Couzens became a member of the executive committee at the reorganization. The million dollar gift was made in the form of securities.

The MODERN HOSPITAL

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STIMULATING STATE ORGANIZATION

THAT the American Hospital Association in the twenty-three years of its existence has played an important role in the development of the hospital field of this country and Canada, no one would deny. Its annual conferences and expositions have been a source of inspiration and knowledge to many superintendents and other hospital executives and more recently its service bureaus have covered a wide range of practical service.

There are, however, types of service that a national association cannot be expected to render; indeed, is not equipped to render. This is evident from the position of influence and service state associations have won for themselves ever since the first one was organized in Ohio on August 25, 1915. During these seven years, eighteen state hospital associations have been organized. With the four New England states that are constituent parts of the New England Hospital Association but do not as yet support state hospital associations, these eighteen organizations represent states having 4,751 hospitals out of a total of 9,021 in the United States and its possessions. They already have to their credit a substantial body of achievement. Several of them are now geographical sections of the American Hospital Association; others contemplate applying for membership.

Whether the organization of state hospital associations has now reached the point of saturation may be doubted. There are still twelve states with more than 100 hospitals each in which state hospital associations have not been organized. And yet three of the associations thus far organized are in states having less than eighty hospitals. A tendency, however, is manifesting itself to organize regional associations covering two or more states, all or some of which feel they lack the number of hospitals necessary to maintain an effective, vigorous state organization. The New England states, for example, although two already have state associations, have recently organized themselves into a regional association and applied for membership as a geographical section of the American Hospital Association. Three of the mid-western and several of the southern states are considering the advisability of organizing regional associations with constituent state bodies.

All this is excellent as far as it goes. But what of the remaining twenty-six states with their 4,270 hospitals? If the growth of state hospital associations is not solely a matter of imitation, if it holds the possibilities of genuine helpfulness, why should not the American Hospital Association be more aggressive in stimulating the organization of state associations in every state where such an organization is justifiable, And where the number of hospitals is not sufficiently large to warrant a state association, would it not be well for the officers of the national organization to hold informal conferences with the local hospital people when legislative or other problems make them advisable in order to carry its influence and helpfulness in an intimate and personal way to the very periphery of its field?

UNDERTAKING SERVICE ASSURED

WE ENTERTAIN no marked animosity toward undertakers. They perform a regrettable, though necessary, function in the body politic and on the whole they perform this function in an honorable and dignified manner. Occasionally, however, we run across a member of this time-honored guild who mixes a bit of politics in with his business of disposing of the dead, much to the discomfort, to put it mildly, of the living.

The particular undertaker we have in mind has hit upon a unique method of stimulating his business and incidentally increasing his profits. Having had himself elected a member of the city

council, he paid his respects to the president of the city board of health appointed by his honor, the mayor; complained that he was not getting enough business from the City Hospital, which is administered by the board of health; and asked the president of the board if he would not kindly see that a number of his business cards were scattered about the wards of the hospital in order to let the relatives and friends of patients know that he would be glad—at the appropriate time to be sure—to serve them. The president of the board, always ready to meet the wishes of one of the city fathers in any way he could consistent with his high moral obligations as guardian of the city's health, forthwith betook himself to the hospital with a hundred cards. Would the superintendent of nurses please see that these cards were distributed in the wards? Having the interests of the patients solely at heart and not knowing or wanting to know one undertaker from another, the superintendent courageously refused to distribute the cards, and presently handed in her resignation.

But the cards were distributed; it was the wish of the city father. And the relatives and friends of the hospital's patients have had the comfort—a service few hospitals are progressive and alive enough to render—of definite knowledge that there is an undertaker in the city who, should the need arise, will be glad to serve them.

Then, too, these cards are a source of reassurance to any patients who may have the good fortune to have them brought to their attention!

SOME GUIDING PRINCIPLES IN HOSPITAL STANDARDIZATION

TO BE successful any great movement must be controlled and guided by well-grounded, basic principles; otherwise it is bound to miscarry and result in the loss of much time, effort and money. In his address at the annual Congress on Medical education, Licensure, Public Health and Hospitals, held in Chicago in March, Dr. John G. Bowman, chancellor of the University of Pittsburgh, enumerated some of the fundamental principles that must guide the hospital standardization movement, whether that movement has to do with improving medical and surgical practice in the hospital, bettering administrative procedure or simplifying equipment. These principles are drawn from Dr. Bowman's rich experience in the standardization movement of the American College of Surgeons, and should be used in the formulation of any further program of hospital standardization that may be embarked upon by the American Hospital Association or any kindred organization. Here are the principles in Dr. Bowman's own words: (1) The aim of hospital standardization must lie within the purposes which the hospitals have consciously set for themselves. (2) The program must be flexible, permitting free action and free play of intelligence, the guide being not a set of rules but a mark of future attainment. (3) The program must require responsibility and accountability on the part of each individual privileged to take part in the program.

For the elucidation of these principles our readers are referred to Dr. Bowman's address which appears on page 418 of this issue. They will not of course jump at the conclusion that these are the only principles that may conceivably control the hospital betterment movement. Indeed, Dr. Bowman would probably be the first to admit that they are not. It is conceivable that if the movement should undertake the betterment of administrative control or the simplification of hospital equipment and structural materials, an additional set of principles would have to be called into play as a result of a broader analysis not merely of the medical and surgical service of the hospital but of the hospital as a whole and its relation to the community.

CHARACTER IN A MAGAZINE

THERE is more to a magazine than merely text matter, advertising pages and cover. Character is of tremendous importance especially in a magazine published for a professional field in which ideals of service are deep rooted. A magazine can have and should have a soundly developed character. Its editors and publishers should have a high sense of public responsibility.

This character is commonly termed prestige. It is a plant of slow growth. It requires many years of constructive thought, of service freely given to the field, of definite accomplishments, to develop prestige or character for a magazine, and hence properly this factor is the principal asset of a publishing business. Character or prestige, as you please, is reflected through the advertising policies quite as definitely as in the leading editorials, if one but looks beneath the surface.

From the first issue THE MODERN HOSPITAL has exercised in the interests of the reader a close supervision of its advertising pages so that the entire hospital field might look to it with full confidence as a guide to approved equipment, supplies and services.

The importance of this function of a magazine applied to the hospital field is of far-reaching significance because in the diagnosis, treatment

and care of the sick, ignorance of new equipment or of new methods which might aid the patient is an acknowledgement of inefficiency.

ELIMINATING NOISE

WHILE in the construction of the hospital of today a great deal of thought is given to the physical comfort of patients, little or none is given to their mental comfort and welfare. We build hospitals that are sanitary, aseptic, and properly lighted, heated and ventilated, and we make them fireproof and durable. In doing so we use steel, concrete, tile and hard plaster, and the result is noise, confusion and nervous excitement. Hospital authorities should give more thought than they have given hitherto to the elimination, or at least the minimizing, of noise in their institutions. It is clearly a serious handicap to quick recovery from illness. So far as practicable automatic door stops should be used; strips of felt will kill the metalic impact of elevator doors; small lobbies at elevator entrances will keep the noise emanating from the elevator shaft from penetrating through the hospital. Sound reverberations within the institution can be eliminated by the application of a sanitary acoustic felt to the upper wall surfaces of rooms and corridors. Sounds transmitted through the structural members of a building may be greatly reduced and often eliminated by proper construction. In this connection our readers are urged to study Professor F. R. Watson's article in the March issue on "Sound Proofing in Buildings with Applications to Hospital Construction." Mr. Richard Resler's article in the April issue on "Confining the Noise of the Hospital to its Source" and the article by Mr. Laurence C. Hart in this issue on "Problems of Noise in Hospitals and How to Meet Them."

In so far as noise is due to the personnel of the hospital, its elimination can probably best be achieved through some such expedient as that adopted by Mr. Chapman at Mount Sinai Hospital, Cleveland, in the organization of the society for the prevention of unnecessary noise, through which the hearty cooperation of the entire lay and medical staff has been secured in banishing avoidable noise from the institution.

THE SIMPLIFICATION OF BUILDING MATERIALS

UPON the very heels of our March building and equipment issue in which one or two articles made a plea for simplification of building material and equipment came an announcement from the Chamber of Commerce of the United States of a recent conference between officials of the department of commerce and representatives of architectural, engineering and building organizations on the simplification of building materials as a means of eliminating waste in industry.

For some time past the United States Department of Commerce, under the leadership of Mr. Hoover, has interested itself in this movement and there is reason to feel assured that something worth while will result from its efforts. We mention this conference here because in the results of this effort to simplify building material the hospitals no less than industry will share, and perhaps relatively to a greater degree. For the desire to use the new and unusual, simply because it is new and unusual, has often been yielded to in hospital construction. This has often been the special temptation of architects who, called upon for the first time to build a hospital, strive after something different, quite indifferent to whether or not it will serve the purpose for which it is intended. If the multiplicity of types and the great variety of dimensions that now prevail in many items of construction can be very considerably reduced, the cost of construction will thereby be lessened. This will mean the greater production at less expense of many of the items that go into the construction of hospitals. Hospital associations, both national and state, will wish to give this movement their moral support and practical cooperation in so far as it bears on the hospital field.

OFFERS MEDICAL FELLOWSHIPS

Fellowships in medicine have recently been established by the National Research Council for the purpose of increasing the supply of thoroughly qualified teachers in medicine in both clinical and laboratory subjects in their curative and preventive aspects.

The fellowships are supported by appropriations of the Rockefeller Foundation and the General Education Board amounting in total to $100,000 a year for a period of five years. Those receiving awards will be known as Fellows in Medicine of the National Research Council.

To quality for appointment as a fellow, a candidate must have the degree of doctor of medicine or doctor of philosophy from an approved university, or preparation equivalent to that represented by one of the degrees.

Since the principal purpose of establishing these fellowships is to increase the number of competent teachers in the field of medicine, each incumbent will be required to gain experience in teaching. As creative work is regarded as essential to the best teaching, emphasis will also be placed upon research.

Fellows will be at liberty to choose the institutions or universities in which they will work, as well as the men under whose direction they will carry on their researches, subject to the approval of the fellowship board.

Correspondence concerning the fellowships should be addressed to the Division of Medical Sciences, National Research Council, Washington, D. C.

HOSPITAL RATES AND THE PATIENT'S POCKETBOOK

"WITHIN the limited sphere of medical relief, philanthropic hospitals of this country, as they are administered, seem to be practicing a sort of limited communism, applying the principle 'from each according to his ability; to each, according to his need.' Why is it that two hospitals in the same community, dealing with apparently the same clientele, differ so widely in their ward collections?"

Believing that the question of hospital earnings from this angle has interests both economic and social, THE MODERN HOSPITAL passed the above query on to representatives of three groups of workers for their reactions.

Methods various hospitals use in fixing rates and in determining the ability of patients to pay all or part of these rates were sought in communications addressed to a selected number of (1) sociologists who, it was thought, might discuss the subject from the standpoint of social policy; (2) hospital administrators; and (3) hospital social workers who have had personal contact with patients and who consequently could speak from the standpoint of the individual patient.

From the social theorists come the following suggestions of F. Stuart Chapin, Ph. D., director of the Smith College Training School for Social Work at Northampton, Mass.

Dr. Chapin declares that eighty-eight per cent of persons gainfully employed in this country are unable to contribute their share of hospital costs by reason of their low incomes. The present hospital situation, in regard to earnings, he declares, is a natural result of fundamental economic conditions and the remedy lies ultimately in directing social policy to achieve: (1) a lowered birth rate; (2) increased productivity of capital and labor; and (3) a simpler (not a lower) standard of living for all classes.

Dr. Chapin's comments are as follows:

"Hospital earnings have an important bearing on social policy. Although it is the physician and the hospital executive who in the last analysis must work out the details of the problem, the social scientist is in a position to point out some fundamental considerations.

"As a general principle the cost of hospital service should be offset by rates charged patients, if the hospital is in the long run to avoid becoming a pauperizing agency which undermines the self-respect of its patrons. In practice, however, this principle is not easy to approximate.

88 Per Cent Unable to Share Hospital Costs

"Recently some significant facts of income distribution in the United States have for the first time become available. The National Bureau of Economic Research has just published the results of a comprehensive scientific study of income in the United States, and finds that in 1918, 88 per cent of persons gainfully employed received incomes of less than $2,000 yearly; that the average per capita income in 1918 was $595; and that with allowance for inflation, the average per capita real income in 1918 was only $376. This means that the normal family of five, two parents and three children, had in 1918 a real income of $1,180 a year.

"Compare this figure with the careful estimate made by the United States Bureau of Labor Statistics for the family of five at the 'rock bottom' minimum of $2,025.56 for 1919.

"Is it not evident from these statistics that most of the 88 per cent who have less than $2,000 a year will be unable to contribute their share of hospital costs? Although the United States is the richest nation in the world we must yet look to 12 per cent of our population to contribute more than their due per capita share of hospital support.

"In spite of these facts, an economic social policy would seem to indicate the desirability of having charges for hospital services show some relation to costs. Hence for each hospital separately it is important to work out per capita costs of service in both short and long term surgical cases, and in both short and long term medical cases. The resulting figures would have significance because hospital incomes are derived from (1) endowments, (2) public subsidies, (3) gifts, and (4) pay patients (in part or in full); and the comparatively small amount of income derived from (4) is offset by that derived from the other sources. This situation is the logical result of the general facts of income mentioned above which are not perhaps widely known.

Hospital Has Role in Social Progress

"As a member of the intellectual proletariat, it is worth while mentioning in passing a condition of affairs in which adequate hospital services for the rich are supplied because paid for, and hospital services for the poor are supplied free, but in which it is increasingly difficult for middle class people to meet the expenses of adequate hospital services. It is becoming increasingly evident that social work, as distinct from relief work or charity work, needs to be extended to include the middle and upper classes. If this condition is recognized by hospital executives, I believe that an extension of hospital social service will supply an important auxiliary means of securing the facts to guide the fixing of rates and the determination of patients' ability to pay.

"From the facts above considered it is evident that the present hospital situation is a natural result of fundamental economic conditions which affect in varying degrees all social agencies. I do not believe that the situation is permanent, but I do consider that present conditions will prevail for a long time to come. What are the remedies?

"It seems to me that the answer lies ultimately in guiding social policy to achieve, (1) a lowered birth rate, (2) increased productivity of labor and capital, and (3) a simpler (not a lower) standard of living for all classes. The modern hospital should play an important rôle in bringing about these desirable results.

"Finally, I am one of those who believe that some form of state-regulated contributory health insurance would help to ease the present situation, since the burden to the hospital of a relatively large number of no pay or small pay patients would be materially lightened by distributing the risks through insurance."

Insurance, according to Dr. Stuart A. Queen, director of the Simmons College School of Social Work in Boston, is the remedy for the present hospital rate problem. His views in part are expressed in the following letter:

"I have never made a special study of hospital earnings or methods of fixing rates, but as a student of social economic problems and formerly as secretary of a state board of charities, I have given some attention to these problems.

"I have been interested in the sliding scale of charges

adopted by some hospitals, but am of the opinion that they are not very practical. Wherever there is the possibility of different charges for a definite service, someone—either the admitting officer or a social worker—must necessarily play the part of detective in order to determine the economic status of the patient. I think that this is undesirable from every point of view.

"Personally I do not believe this problem of hospital rates can ever be satisfactorily solved except on a basis which involves some form of insurance. This might be local, state or national; it might be mutual, joint-stock or state; but in any case a scheme of health insurance would, properly worked out, not only guarantee the necessary income, but would also eliminate the very troublesome problems involved in discrimination between patients of different economic levels."

Routine at Vancouver General

Practical suggestions in rate fixing are contained in the following account from the administrator's point of view supplied by Dr. M. T. MacEachern, general superintendent of the Vancouver General Hospital, Vancouver, B. C.:

"Hospital schedule of charges, to be fair and businesslike, can only be computed intelligently on a cost accounting system. This means fairly extensive detail. In our institution we have computed, as far as we are able, the cost of the various services with 15 to 20 per cent added.

"The ability of patients to pay is determined in various ways:

(a) Initial investigation: Patient on admission gives to the admitting officers all the information possible about his financial status, unless he is too sick, then it is secured from friends or later from the patient in the ward when able to give it. Our admitting office is in charge of nurses well trained in this work, who have no trouble in securing this information in practically all cases. Therefore, generally speaking, on admission we get considerable data as to the patient's ability to pay. All private and semi-private patients are asked to pay a week in advance and as they remain in the institution are supposed to keep this paid up.

(b) Investigation of out-patients: All patients attending the out-patient department come with investigations made by different organizations sending them in. This is done on a form which the hospital supplies. This investigation is checked over by the social service nurse, who manages the out-patient department. Usually the investigators follow a certain basis of say, an allowance of $5.00 per member of the family, that is, in a family of four children with father and mother the weekly allowance would be $30.00 and the monthly allowance $120.00. If the patient is receiving more than $120.00 per month he is able to pay for his treatment; if less than that he is eligible for free treatment. Of course you can quite see that this rule cannot always stand; each case, to a certain extent, must be considered on its own merit.

(c) Investigation after admission to the hospital: This is done through special investigation machinery re patients inside and outside the institution. Inside the information is secured by a diplomatic investigator by personal contact with the patient or with the relatives. Certain information may be secured by telephone from the employer or other sources. Outside investigation is made through a specially delegated officer who checks up all information at the time of admission and probably by personal visit to the abode of the patient. This man goes around on a motorcycle and can cover considerable distance each day. The investigation department, therefore, uses every possible method, personal contact with the patient, relatives or friends, communication with the employer or with the doctor, personal visit to the patient's home. All information gathered is collected and compiled in a permanent record in the business office.

(d) Use of various organizations: In our work here we secure valuable information from many public health and welfare organizations, as for instance: school, medical and nursing service, Soldiers' Civil Re-Establishment, Workmen's Compensation Board, Relief Department, Police Department, churches, clubs and all manner of such organizations. We have an organization in Vancouver known as the Greater Vancouver Public Health and Welfare Association, which embraces all organizations doing health and welfare work. Through such sources valuable information can be secured. We expect shortly to open up a confidential exchange bureau of information in the city, and I feel sure that such would help us a great deal in our investigation of patients' finances here. However, I find that our own investigators are the best; they get the information more quickly, more accurately and with the least possible disturbance to patients and relatives. It is desirable in all cases as far as possible, to get all the information possible without bothering the patient at all. This can be accomplished in many cases."

Finds Few Cases of Misrepresentation

Procedure at the Johns Hopkins Hospital of which Dr. Winford H. Smith is director is outlined by his executive assistant, in charge of the admitting office, Miss Emma E. Carter.

"In our experience," says Dr. Smith, "we are convinced that comparatively few patients get into the hospital as free cases as the result of misrepresentation. On the other hand, however, many patients do get into the hospital with a promise to pay, whom we later have to transfer to the free list, or whom we are obliged to carry on a charge account, which not infrequently turns out to be a bad account. As a rule we do not place accounts for public ward patients in the hands of a collector. Occasionally when we are very sure of our ground we do this unhesitatingly.

"Private patients we have very little difficulty with. They are expected to keep paid a week in advance. If they do not or if we have any reason at the time of admission to doubt their ability to pay, they are obliged to give us references with whom we can communicate as to their financial responsibility."

Miss Carter's statement which follows deals solely with ward patients:

Place of Residence is Guide

"In the admitting office where the ability of the patients to pay full or part of the hospital rates is determined, we first consider the locality or that part of town in which the patient lives. This is a very good guide to us in the handling of cases, as we can usually judge something of the financial status of patients by knowing the neighborhood in which they live. We depend not only on the cooperation of the patients themselves, but of the family as well to obtain the desired results. All free beds are reserved for city and state cases, but even so each patient in turn is questioned regarding finances. When once the confidence of the patient is gained, with a few exceptions they will be frank and will discuss without hesitancy their business and their financial affairs in minute detail, stating the amount each working member of the family is making, the length of time they have had work or been without work, the likelihood of losing or procuring a position, and, what is even more important,

home expenses or financial problems. After this has been accomplished, and the various points made clear and sufficiently straightened out, we can then decide, or help to decide, the amount the patient is capable of paying, whether full rate, part pay or free.

"If we find a patient has financial support suited to his needs and we feel he is objecting to the business arrangement unnecessarily, we require him to pay the full rate if he desires to enter as a patient in this hospital.

"For out-of-state cases the method pursued is simpler, owing to the fact that it is understood that as a rule they can be admitted only if they can pay the full rate."

System at New Haven Hospital

At the New Haven Hospital, New Haven, Conn., Dr. Harold W. Hersey, superintendent, has in operation the following system of determining the ability of patients to pay:

"We have certain fixed rates which at the present time consist of the charge of $17.50 a week for accommodation in the wards. This includes medical and surgical attendance together with medicine, (except special formulae and serums) nursing and laundry. This charge is the same in all departments of the hospital.

"A few free beds are available for patients unable to pay anything. Such patients may be sent in through the nominators to these beds, or patients not sent in in this way who seem unable to pay any of the ward rate are referred to the social service department for investigation. Social workers look into home conditions and a report is made on a slip recommending that the patient be placed on a free bed. These are approved by the superintendent who specifies what free bed or fund is available for the use of this patient and the per capita cost is charged to the fund.

"Patients who have no ready money at the time of admission but have prospects of some time being able to pay their hospital bill are admitted at the regular ward rate with the understanding that payment is to be deferred until such time as they are able to meet the expense. Very often such patients pay $5.00 or $10.00 per week or even less, until their hospital bill is paid.

"With the present lack of employment, we have had to admit many cases who are not, strictly speaking, eligible for free beds but who at the present time are out of work and unable to meet expenses. These pay what they can while they are in the hospital and the balance in small amounts such as $5.00 a week or even as little as $5.00 per month until the bill is paid.

"In the main office we have a collector who, if former patients do not appear on the definite date set in their agreement, goes to their homes to collect or to find out the reason why they cannot meet their payments.

"Some of the charity patients, of course, are eligible for city aid and they are referred to the board of charities at City Hall by the dispensary. If they are eligible for city care, they are sent into the hospital at the rate of $10.00 per week, which is all that the city pays.

"Outside towns pay the regular ward rate of $17.50."

Social Worker is Judge

"At Mount Sinai Hospital in Cleveland," writes Frank E. Chapman, director, "we primarily divide our patients into three classifications: pay, part-pay and free. We then divide our beds into five classifications: private rooms with bath, private rooms without bath, semi-private rooms (which are two and four-bed rooms), pay beds and free beds in the ward.

"Our private room rate is predicated absolutely upon the patient day cost of the institution, plus a reasonable degree of profit, and every occupant of a private room is expected to pay the prevailing rate of that room. We make no class allowances, i. e., to the medical profession, social workers or nurses. We do, however, in specific instances make an allowance for these classes of individuals, where their financial condition indicates.

"Semi-private rooms are a little lower than actual cost. These rooms are located in the private pavilion and have all of the facilities of private rooms with the exception of a single bed in a room. Into this group of beds, we place those patients who are not strictly ward cases but who cannot afford the expense of a private room. May I add in passing that to me this is the one big service that any hospital can render.

"All admissions to our wards are made through the social service department, and the rate is based entirely upon the judgment of the head of that department. To illustrate specifically, our ward rate is $3.00 per day. I venture the statement that not over 25 per cent of our pay ward admissions pay $3.00, the rate varying all the way from $3.00 to 50 cents a day. Our free beds of course are made available to those people whom we feel cannot pay anything."

BRITISH COLUMBIA MEMORIAL HOSPITAL UNDER CONSTRUCTION

Provincial Royal Jubilee Hospital, a memorial to the soldiers of British Columbia who fell in the World War, is being erected at Victoria. P. Leonard James and K. B. Spurgin of Victoria are the architects. The east wing is the first unit to be erected.

The east wing comprises the public ward building, 128 feet by 50 feet, and the private ward building, 155 feet by 45 feet, and provides altogether for 140 beds on four floors. Of these thirty-four are for maternity cases, the entire third floor being devoted to this purpose with two delivery rooms, nurseries, day rooms, etc.

The operating department occupies the fifth floor and is most complete and modern in every respect. Six operating rooms are arranged along the north side of the building, each pair of rooms having a surgeons' scrubroom in connection. Special facilities are provided for eye, ear, nose and throat, also dental cases. A large sterilizing room, sink room, nurses' workroom, surgeons' common room and lavatory are arranged on the opposite side of the reception lobbies.

In the northern portion of the ground floor are well arranged chemical and pathological laboratories, autopsy room and commodious lecture rooms.

The entrance is at the ground level and opens directly into a hall from which the two large elevators connect to the ward floors above. A patients' receiving room is provided on this floor.

The building will be steam heated on the Dunham system. A gravity exhaust system of ventilation is to be installed, the open window together with a special type of direct-indirect radiation being relied on as being more effective and manageable throughout the hospital generally than the expensive mechanical systems of forced ventilation so prevalent some years ago, and more suitable to local climatic conditions.

Mechanical ventilation will, however, be employed for the operating rooms, where conditions will not permit fresh air being brought direct from the outside.

Give me health and a day and I will make the pomp of emperors ridiculous.—Emerson.

EFFICIENCY IN HOSPITAL ADMINISTRATION*

By FRANK E. CHAPMAN, Director, Mount Sinai Hospital, Cleveland, Ohio.

Hospitals in the main are admittedly organized on an exceptionally loose basis, and as a consequence inefficiencies of management and operation are bound to creep in. A plea for trustees who function and for administrative heads who are qualified to administer is the text of this paper. The application of principles, procedures and practices that have proved efficient in industry and are equally applicable to hospitals is advocated. The adoption of restrictive measures that produce so-called red tape is, of course, to be deplored, but the administration of the affairs of so complex an operation as that of a hospital must have certain restrictive measures that are adhered to. It must be realized that the fundamental principles of operating a steel mill are identical with the fundamentals of operating a hospital. Therefore schemes of organization that have produced efficiency in industry are also applicable to hospitals.

In A discussion of the theories and principles of hospital operation, we should first visualize what a hospital is. The first hospitals were for the insane, and the development of hospitals in those early centuries was practically at a standstill so far as concerned their function. With the introduction of the laws of antisepsis and asepsis and with a better understanding of the theory of anesthesia came the gradual development of the surgical hospital. After a period of time, with the progress of the science of medicine and the realization of the need for that intensive correlation of various medical specialties in order to get the proper diagnosis, there developed the need for a hospital offering facilities other than surgical.

A hospital to function properly must be the health center of the community it serves. It must furnish every known means for the scientific diagnosis and care of patients. Just in so far as it does furnish each of these needs, so far is it going to succeed. With the development of hospitals with this principle uppermost in their scheme of operation, we shall see a more intensive and extensive hospitalization of the sick than ever before. Many conditions lead one to this prediction: the demands of the clinician which cannot be met, our present-day shortage of both medical men and nurses, our present-day method of living—these are among the most important factors that will produce this greater hospitalization. If this prediction is sound in the main, is it not up to you and me to see to it that our hospitals fulfill the obligations assumed when they took unto themselves the names of hospitals.

We have heard innumerable comments that hospitals are inefficient and those of us who have been privileged to know the hospital field generally rather than locally will admit that there is not the degree of efficiency in hospitals that exists in industry. In this paper I will attempt to outline what to me is fundamental in organization from the board of trustees down.

Members of boards of trustees are in the main selected because of their individual successful performances,—they are pre-eminent in their respective places—but the sad commentary is that when on administrative bodies of philanthropies, they forget the principles that made them successful in their individual walks of life. It must be realized that the fundamental principles of operating a steel mill are identical with the fundamentals of operating a hospital. Therefore the schemes of organization that have produced efficiency in industry are applicable to hospitals.

The board of trustees of any organization is the policy-forming body, interested in the great perspective of the whole problem, in the formation of policies both administrative and financial, and in the selection of someone delegated with the power to carry out the principles outlined by them. There is a pernicious practice in a large majority of our hospitals of committees of the board acting in other than an advisory capacity. The trouble with most of our boards of trustees is that they are trying to run everything, instead of having a superintendent capable of administering the affairs of the institution.

In a large number of instances the superintendent has no control over the organization he or she serves; small wonder that hospitals are not run efficiently. I can show you organizations in which the superintendent does not presume to give instructions to his various department heads without previous consultation with the board of trustees, for the very reason that if he did, and the department head disagreed with the instructions, the department chief would go to some member of the board, and the next day the order would be rescinded. How long would such a policy last in industry?

Size of Board

The size of the hospital board is immaterial, but first of all let's get an active board. Let's get a board that is composed of men from every possible walk of life, so that we may bring into its deliberations a composite knowledge of as many divergent points of view as possible. Let's get an individual who can bring the school point of view, the financial point of view, the merchandising point of view, ad infinitum, so that the policy-forming body will bring into its deliberations a broad view of all of the complex problems of community activity.

An ideal board is of approximately eighteen members. In my opinion there should be definite standing committees, approximately five in number. Mount Sinai Hospital in Cleveland has a board of eighteen members, with an executive committee, a medical staff committee, a building and grounds committee, a purchase and standards committee, a finance and audit committee, an out-patient and social service committee and a training school committee. These committees are made up, with the exception of the executive committee, of the chairman and two members. An attendance of two is expected at all committee meetings, and these committees meet regularly in the performance of their work.

The executive committee is comprised of a chairman of each one of the standing committees with the president of the board of trustees as chairman. The secretary and treasurer of the board are also ex officio members of this committee.

No committee of the board of trustees may give instructions to the administrative officer. The executive com-

*An abstract of an address before the Taylor Society, Philadelphia, January 23, 1922.

mittee has authority to give instructions in an emergency, but such instructions must be confirmed by the board of trustees at its next meeting. All instructions, except of course in emergencies, must come through regular channels to the board and by it be transmitted to the administrative officer.

Qualifications of a Superintendent

To my mind the superintendent should be responsible to the board of trustees for the entire activity of the institution. He should be the medium of expression of the board to the various personnel, and in turn he should be the medium of expression of the personnel to the board.

I should like to define just a few of the requisites, as I see them, of a proper administrative officer. He must have a financial sense. He must have a buying sense, with a knowledge of practically every commodity that enters into our economic life. He must have a mechanical sense. He must have a professional point of view; be able to recognize the problems of the various professional groups. He must have a social point of view. He must have a technical knowledge of a very great many intricate procedures, not necessarily an intimate knowledge of them, but a general knowledge. And last, but not least, I believe he must have a very large portion of the milk of human kindness, for I don't believe that a hospital can be properly administered on any other than a personal basis.

When you get a composite of these qualities, you have an individual that in any other walk of life could demand a great deal more in material returns than the average hospital position pays, and may I right here offer a plea that all of you board members read the report compiled by the editor of THE MODERN HOSPITAL and study the range of hospital salaries that are paid; after you have read it, stop and think about it a little.

You ask me what is the matter with hospitals, and my unqualified answer to you is that you cannot get efficiency for the salary that the average hospital pays its superintendent, and until such time as our boards of trustees realize the importance of efficiency in the administrative positions of their hospitals, and accept the principle that we should get the maximum of efficiency out of one of the fundamental functions of our every-day life, just so long will it take us to get efficient hospitals.

Outline of Departments

Following is an outline, as I see it, of the operation of a hospital divided into various departments. These departments are not listed in order of their relative importance, but only for purposes of control:

Administrative	Medical staff attending
Housekeeping	Medical staff resident
Laundry	Laboratories
Mechanical	X-ray
Purchase and issuance	Special therapies
Dietary	Social service
Nursing	Out-patient

These departments are roughly divided into physical and professional groups, but please do not forget that their activities are so closely interrelated that there is practically no line of demarcation. Do not forget further that the contact of the administrative officer with each of these departments is administrative only, and that the minute he presumes to either dictate or control the activities of the professional group, he assumes unto himself a prerogative that is unsound. His job is to secure an absolute correlation and cohesion of activities.

The financial policy of most of our institutions is really a joke. To use the slang expression "it just ain't." Money is a necessary evil. We must have it, and in order to make it work for us to the best possible advantage, it must be conserved, and therefore every hospital, no matter how small should apply the budget system of financial operation, and stick to it through thick and thin. I am not particularly interested in how my dietitian gets results. I am only interested that she lives within her budget. I am assuming that by virtue of her training she is more qualified to say whether she shall serve squab or corned beef and cabbage.

General Administrative Groups

Administration of a hospital is divided into the following general groups:

Superintendent's office.
Accounting general.
Accounting patients.
Admitting and registrar.
Telephone and information.
Records and analysis.

The superintendent's office must be the pulse of the institution. In it one should be able to tell what is going on all over the place, and the superintendent can do this by sitting at his desk. I believe he should get around the institution and get a feel of it, but I don't believe that he should go around so much that he will lose a perspective of the whole. One of the greatest mistakes that most of our administrative officers make is that they tie themselves down with so much detail that they have no chance to see the big things. If the superintendent is tied down with detail he cannot get that big perspective of community service, which after all is the real job of a hospital superintendent. Most of our administrative officers are performing duties that could better be performed by a much lower priced member of the personnel.

There can be produced a system of morning reports that at a glance will reflect the condition of the entire institution to the superintendent. That morning report can be prepared in from five to fifteen minutes, and it should only be necessary for him to give it a glance. It is just as much the right of the administrative officer to have this on his desk every morning, as it is for the head nurse to have a report of the conditions of the house patients on her desk.

If a hospital is large enough to warrant assistants, please, superintendents, don't make the mistake of letting them run wild; allocate definite duties to them, and let them alone. Load your responsibilities on to them, and make them responsible for results. Turn them loose, and let their success be a test of your ability to administer. I have found through experience that if you set up an elaborate set of rules of administration, thirty days after they are set up a large percentage of them are dead letters. Make your rules and regulations active. Make your system so flexible that obsolete rules can be discarded without affecting the live ones.

I am not going to attempt to outline the details of an accounting system, but merely to state the various pertinent requirements. First, there should be a set of books that will permit of a complete recording of every financial transaction of the institution; second, a chart of accounts that will permit of a proper allocation of all charges and payments to proper expense accounts; third, a proper budget system as previously outlined; fourth, a daily report to the superintendent; fifth, machinery for a monthly report to the board; and, sixth, a control of daily earnings and collections.

The patients' accounting system should be predicated

upon the following: first, a system of special charges for special procedures; second, a ward census which answers the dual purpose of originating charge to patients and furnishing the information for vital purposes; third, a report of admissions and discharges; fifth, the preparation of bills and collection of accounts. Such a system should permit of the daily control of your patients' accounts. In this way the balance at the end of the month is struck automatically with the last day's work.

The admitting service consists of the following requisites: the patients' register; the clothes list; the valuable list; the mechanism for sending information immediately to the proper source of information; and facilities for the reservation of rooms. The details of such a service, of course, must be worked out in the individual hospitals.

Telephone and Information

There is one service in the institution that I should like to dwell on at a little length, and that is telephone and information service. To my mind the telephone is the nerve center of the institution, and it must be so efficient as to furnish quick and efficient means of communicating not only from the outside world with the hospital, but between departments in the hospital.

We have adopted a policy in the institution I serve, on our main telephone trick, of employing no one who has not had instruction by the telephone company in voice control. The telephone, as I see it, is the gateway of the hospital, and it makes a large difference in the opinion of the outside world if you have the right kind of a voice on the telephone.

It may be desirable at times to combine the telephone and information center. In my opinion, it is logical. Others disagree with me. I believe that inasmuch as the telephone switchboard is the recipient either directly or indirectly of all information of the hospital that it is very logical to set up the information center at that point. In any event, wherever you set up such a center, make it all inclusive.

May I describe to you the information service that we have adopted at Mount Sinai Hospital, Cleveland. I don't say it is perfect. I am merely giving it as a suggestion. We have a cabinet with twelve drawers for visible index, in which are arranged the following: an alphabetical record of patients by location; a census showing the board of patients on each ward; a reservation for obstetrical rooms. All information of the institution, telephone calls, etc., are referred to information. All the patients in the institution are flagged with colored tabs on one, two, three and four conditions. Concerning all patients that are in conditions one or two, the information is given out without contact with the ward. Of conditions three and four, on the danger list, information is instructed that under no conditions is information to be given out except after contact with the ward. In addition, we have placed in our main lobby an information or hostess desk, take care of personal visitors to the institution. This installation was one of the finest things from the standpoint of policy that we have ever done. The interesting thing about this installation is that for the first two months after it was inaugurated the individual in charge was barely kept busy. Since that time we are constantly having to rearrange her work by reason of the increased number of activities that have been developed.

Records are divided into three groups; professional, financial and vital. The professional group is the patient's history and all of the various procedures that enter into it. A busy practitioner of medicine cannot be expected to make a complete record of his patient's performance, unless he is provided with a mechanism that will make this recording easy. Financial records form the second group. The trouble with most administrators is that they look upon the recording of the financial performance of their hospital in a sort of humdrum way, with no special interest in it. To make a study of figures is as much or more romantic than reading a book of fiction. If these figures are studied intelligently they will reflect much of human interest. It is necessary that there be available quickly for any given period a statement of that period's performance. The analysis of accounts six months late will be of no value.

Vital statistics should include an analysis of all of the various activities of departments. If your nursing cost jumps twelve cents in one month, find out why. If you have a large number of complaints on one ward, why is it? If you will go around with an eternal question mark on your lips, which question marks emanate from the reports that you have intelligently studied, you will be surprised how quickly a large part of the troubles that you may have will be ironed out.

Mechanical Department

Probably one of the largest items of expense in hospital operation is the heat, light and power, and maintenance and repair expenses, and yet I venture the statement that it is one of the most sadly neglected departments in the hospital, simply because the average administrator does not know anything about his mechanical department, and because the administrative board has not seen the wisdom of employing efficient supplemental mechanical supervision. Keep a check on the number of tons of coal you use, on the amount of water you use, on the mean average temperature of a given month, compare it with last month, and see how you come out. Find out how many tons of ice you pull, what it is in terms of percentage, and see that you are buying the kind of coal that you ought to have. Keep a record of the repairs on your wards, how they compare as between ward and ward, what the nature of these reports are.

Purchase and Issuance

There are three problems in this general head: first, purchase; second, storage; third, internal requisition.

Requisitions for purchases are two-fold—one from the storeroom, and the other from department heads for special equipment. Machinery should be set up so that absolutely no purchase of any type will be made without the definite approval of the administrative officer and without the knowledge that these purchases will not exceed the budget for the account to which it is to be charged. No purchases, no matter how small, should be made on any other than a competitive basis, and bids should be obtained.

All orders given should be confirmed in writing, this confirmation to be specific in detail of commodity, price, terms and delivery. I think it is desirable that this confirmation be made in triplicate—one copy to the vendor, one copy to be used to follow up the purchase, and another copy for the storeroom.

All receipts of commodities should be on a written form, in order to complete the transaction, and to make the bill ready for payment. Every voucher that is passed for payment should contain the following: a copy of the purchase order with the approved request for purchase; a receipt slip indicating receipt of goods; a bill from the vendor properly o. k.'d as to receipt, price and extension. All of these should be filed with the voucher.

As to the problem of storage and recording, in my

opinion all hospital supplies should be carried on an inventory card or sheet. This inventory should show the date received, the firm name from whom purchased, the commodity, the price, the amount of the commodity, the amount of money represented, and to whom distributed. The store's inventory should be carried on a chart of accounts similar to the financial accounts. The expense item of a given period should be predicated upon the monthly inventory adjustment; this inventory to be taken on the adding machine from the inventory sheet, except on biyearly periods when the physical inventory should be taken. In other words, the inventory figure for a given account, as of the first of any month, plus the receiving for that month, minus the inventory for the last date of that month, should equal the expense for that account for that month. In addition to the stores inventory there should, I think, be an equipment inventory of the institution.

The internal requisition system is one of the bugaboos that most of our administrators fear, and in my opinion too much stress cannot be put on this system. Efficient buying may save ten to fifteen per cent. Efficient issuance of supplies can save untold per cent. I should like established, first of all, the fundamental principle that the consumer at no time should control. In other words, that the dietitian should never have control of anything else but her daily needs of foodstuffs. All requisitions should be approved by the superintendent or a properly delegated assistant superintendent, and at no time by the department head. There should be established a definitely set supply day, not exceeding once a week, with the possible exception of the main kitchen, which may have daily supplies. There should be a definite system of breakage exchange, and broken commodities replaced only on an exchange basis. In other words, a broken thermometer should only be replaced when the broken parts are brought to the storeroom. The value of this broken commodity may be nil, but the moral effect will produce results.

Dietary Department Should be Primary

The problems of the dietary department are two-fold, the feeding of patients, the feeding of personnel. There is a variation in control in various hospitals, but in any event the department should be considered a primary department and report made by the head of the department direct to the administrative officer and not through any other channels. The old-time practice of having a dietitian under the principal of the school of nurses is fundamentally incorrect. The submittal of routine menus for given periods cannot help but produce not only economy but efficiency.

Nursing Problem is Difficult

In the nursing department there are two problems, that of nursing patients and that of training student nurses. Today one of the biggest difficulties of hospital administration is the lack of understanding between nurses and the administration of hospitals, and it will take a mighty levelheaded piece of thinking to avoid bringing about a chaotic condition. The attitude on the part of some of our nurses that "the hospital is a bridge upon which the superintendent of the hospital and the principal of the school of nurses may meet to discuss problems of nursing education" (and I am quoting literally the words of one of the members of the nursing profession), is so very far distant from the ideals and ideas that I have of hospital service that I think it is bound to cause a lot of trouble.

Most of us have seen the pernicious effect of one man controlling a hospital, and it is just such a condition that I should like to fight. To set up a system for the formulation of the proper administrative control, we have established at Mount Sinai Hospital a medical council, consisting of the director of the hospital, the director of surgery, the director of medicine and the director of one of the specialties, and to them is referred all matters dealing with medical policies. No medico-administrative policies are issued by any one of the constituent members of the medical council, but they are transmitted by the director of the hospital, as orders from the medical council. Very important is the development of monthly meetings of the various services. This cannot help but be productive of great good.

X-ray Laboratory and Special Therapies

In the next division I am going to include x-ray laboratories and special therapies. These facilities are a definite part of the hospital service, developed as an aid to the clinical staff in the diagnosis and treatment of diseases, and can in no sense of the word be considered as primary services. They are merely supplementary to the clinical staff. It is my sincere hope that the day will soon come when they will be included in the cost of room service, just the same as the nursing and dietary cost.

The development of medical and hospital social service is probably the newest development in the hospital field. Very few of our institutions have in any sense realized the potentiality for good of such a service. There are untold advantages and avenues of service. I will just mention the two which any organization can start with: the follow-up of interesting cases, and the affording of material relief and the assuaging of the anguished minds of some patients in the hospital in regard to the condition of those upon whom they are dependent. We have found a very great field for this latter type of work in our own institution.

If the hospital is to be the health center of the community it serves, and if by this example it is to assist in the formulation of better medical practice, then the biggest avenue of service that it has is the operation of an efficient out-patient department. By very nature of the work that it does, an out-patient department reaches many times the number of people that the hospital proper reaches, and reaches them in a way that can be of great therapeutic value.

After having drawn the comparison as between industry and hospitals, I should like to crystallize this simile —both of them have a board of trustees, the policy-forming financial group; both of them have a general manager, one may be called president, the other the superintendent; both of them have department heads, in one group he may be called production manager, sales manager, ad infinitum, in the other he is called principal of the school of nurses, dietitian, ad infinitum; both of them should have, if they have not, laboratories for research and checking; both of them, if they are to be efficient, must have regular channels of disseminating information and instruction, to the end that the top may know what the bottom does and that the bottom may understand the problems of the top. In only this way can we get that efficiency that is so desirable. You may say that I am building up for you a mountain of red tape. I answer you by saying that when it becomes red tape, it becomes inefficient. But so long as it is virile, so long as it produces results, the procedures that have been outlined will produce the more efficient plant.

RECRUITING NURSES BY ADVERTISING

How recruits for its nurses' training school were obtained by Mercy Hospital, Peoria, Ill., through newspaper advertising, is told in a recent issue of *Printers' Ink.*

In common with many small hospitals, this Peoria institution found its service handicapped by an insufficient number of student nurses. Whereas the graduating classes numbered ten or twenty, the probationers would number only from two to six.

One member of the board of trustees had unbounded faith in advertising and he obtained an appropriation that would tell the story of the hospital's need in the local newspapers. The advertising campaign was placed in the hands of an agency which prepared six advertisements stressing the rewards that come to the registered nurse when her training period has been completed.

Emphasis was placed in each advertisement of the series on the professional and monetary aspects of nursing since

"Florence Nightingale, R. N."

The same thrill that a man feels when he is first privileged to place "Ph. D.", "LL. D." "M. D." or "D. D. S." after his name, comes to the young woman who has completed the course of training at a recognized training school for nurses and is authorized to put "R. N." after her name to signify that she is a "Registered Nurse" and qualified to go into any home or hospital and nurse back to health and strength the patients whom she is to serve. As a follower in the footsteps of a woman who will be revered for all time, Florence Nightingale, every Registered Nurse has a right to feel as proud of her ability and skill as has the doctor with whom she will work most of the time.

"R. N." means something more than "Stenographer" or "Typist" or "Secretary." "R. N." is not something to be obtained in three or six months. It takes three years of study and practical application of the things you learn before you can write "R. N." after your name—but just ask any "R. N." you meet if it isn't worth it!

"R. N." Costs More—And it Pays More!

Like everything else worth while, it takes effort. But the rewards are so vastly greater than those of mediocre employment that Registered Nurses are on all truth, in a class by themselves.

A profession that will support you independently—or an education that will help you to be a better woman, a better wife and a finer mother. Do you want it?
A class in our training school will start soon. Come and talk it over with us.

THE MERCY HOSPITAL
Franklin and Perry Sts. Peoria, Illinois
MARY A. HOUGHTON, Supt.

One of the six advertisements in a local newspaper which moved 100 young women to inquire about the nurses' training school.

it was an established fact that the chief cause of the student nurse shortage was the good wages being paid girls and women by factories and industries requiring no preliminary training course. The accompanying cut shows the character of the ads. The worth of nurses' training to a wife and mother was not overlooked in the campaign.

As a result of the ads more than 100 girls called, telephoned or wrote to the hospital for further information. The advertising had purposely omitted any list of qualifications and so a number of those making inquiries did not possess the proper prerequisites. But from the suitable applicants the training school readily obtained its full quota. So moved was one young woman by the advertisement that when she learned she could not meet the qualifications she enrolled in a night school to round out her education.

There is no better ballast for keeping the mind steady on its keel, and saving it from all risk of crankiness, than business.—Lowell.

RAG DOLL HOLDS FIRST PLACE

Walking dolls, talking dolls and dolls with real hair have failed to supplant the old-fashioned rag dolls in the affection of children, a toy popularity contest among the children of St. Mark's Hospital in New York has disclosed. The raggier the better, the hospital authorities have found, and so deep in some instances does the child's attachment for the doll become that the toy must be beside him before he will go to sleep.

E. F. Lohr, superintendent of the hospital, who has been studying the reaction of children to toys, believing thoroughly in their "toxic" value, expresses himself as convinced beyond question that the old rag doll had an appeal that is equaled by no other toy.

"Our children's ward here has always been of particular interest to me," Mr. Lohr declares. "Ever since I noticed how toys would take a child's mind off its illness and really aid in convalescence, I have been watching carefully which toys held the most popular appeal for the little ones. I have made test after test, using all kinds of articles, from the cheapest to the most expensive. In nine cases out of ten the little old rag doll goes to the child's arms, while all the other toys are spurned.

"Of course now I am speaking for the little girls, although the rag doll stands high also in the affections of the boys, especially those under four."

LOOKING UP TO THE MOVIES

Hospital days will not be so tedious for patients in the hospitals of Los Angeles, Cal. when they can see the latest motion picture releases projected on the ceiling above their beds. Marshall Neilan, the producer, has announced that he will install a DeVry projection machine, such as the one Wesley Barry is operating here, in every hospital in that city.

Two patients at California Hospital, Los Angeles, are following the adventures of "Freckles" Barry in "Penrod."

A GLIMPSE AT THE PAY CHECK OF THE HOSPITAL SOCIAL WORKER

By J. J. WEBER, Managing Editor, The Modern Hospital, Chicago

FOR centuries women of broad sympathies and a love for humankind have served the unfortunate in the name of sweet charity. They asked no reward other than gratitude and they received only that. Although their efforts were ever generous, their methods were frequently unscientific and they often developed greater dependence among the dependent, thus adding to indigence and pauperism.

In recent years social service has taken on a scientific and professional aspect. Social problems have been analyzed and the resultant principles applied. The social worker of today possesses no less love of humanity or enthusiasm for righting social wrongs than her sister of the nineteenth and previous centuries, but she has an understanding of sociological factors, she is working for permanent rather than temporary relief, she is a small unit in a large organization which presumably is not duplicating the efforts of another, and she is working not only for the improvement of the individual but of the social order.

But because the work in this new and larger aspect is no less an outlet for unselfish enthusiasm, is appealing to those with the urge for serving their fellowman and is fruitful of both immediate and ultimate satisfaction, the world has scarcely made financial rewards for the work commensurate with the energy, skill and training expended in it. The satisfaction the social worker gets from her service must in a measure compensate her for a lesser wage.

No Recognition of Special Training

The medical social worker is not an exception. In the fifteen or sixteen years of her connection with the hospital she has become indispensable to it. Few large hospitals are without her, and with the growing realization of the value of follow-up work her need is bound to extend. A salary survey indicates that her financial reward is on a par with that of other social workers but that hospitals have not always given recognition through the pay envelope of the special knowledge she must possess in addition to her general training.

Simultaneously with an investigation of salaries of hospital executives, The Modern Hospital collected during 1921 data concerning the stipends of medical social workers. On these data, gathered by the questionnaire method, are based the conclusions drawn in this article. Questionnaires soliciting information on the salaries paid directors of social service, the estimated monetary value of living costs furnished by the hospital, and the date and amount of their last wage increase were dispatched to 785 hospitals in the United States and Canada. The response to these queries was by no means unanimous but was proportionate to the careful distribution of inquiries and so undoubtedly is of some scientific value.

In the first instance, questionnaires were sent to 500 hospitals of less than 100 beds, selected from various states of the republic in relative proportion to their population as based on the 1910 federal census. Responses were received from 112 of these institutions. Secondly, a list of 285 non-Catholic hospitals of the United States and Canada of more than 100 beds, based on the American College of Surgeon's 1920 list of approved hospitals was compiled and identical information was sought from them. One hundred and sixteen answers came to this appeal for information. So the succeeding figures are based upon the replies of 22 per cent of the smaller hospitals questioned and 40 per cent of the larger institutions. Hospitals represented in the survey vary in size from 20 to 2,700 beds.

Average Yearly Wage Is $1,528

Before considering the comparative salaries of hospital directors of social service, it might be interesting to know just how widespread the position has become in institutions for the sick. Among hospitals of less than 100 beds, the survey shows that 10½ per cent have social workers. When the 100 to 200 bed group is reached it is found that 46 per cent of the institutions have medical social workers; in the 200 to 299 bed group, 70 per cent; in the 300-499 bed group, 84 per cent. Ninety-four per cent of the hospitals of 500 and more beds, represented in this survey, have one or more social service workers. These percentages, correct last summer, are probably considerably larger today. The position is being created rapidly in institutions all over the country. Notations on many replies indicated that the social worker had been only recently added to the staff or that such an addition was being contemplated.

Considering all the hospitals represented, regardless of size, the average yearly wage for medical social workers in the United States and Canada is $1,528. Into such an average went few extraordinarly high salaries and none of the nominal wages paid by religious institutions for deaconess service, etc.

This is more correctly a pure salary average than can be secured for a hospital executive or dietitian. In a consideration of such positions comes the factor of living expenses which is difficult of estimate. The hospital social worker, in the main, gets little or nothing outside her salary. In many institutions her luncheons are furnished her; in some, all of her meals; in others, nothing.

Outside agencies frequently furnish social workers to the hospital, paying part or all of their expenses. Salaries in such instances seem to be on the same scale as when met by the hospital.

Salaries Range from $720 to $2,800

The highest salary paid a director of social service in any of the six classifications herein listed is $2,800, this in a hospital of 117 beds. The $2,800 is an increase of $300 over her salary in 1920 and includes no maintenance.

Low level is $720, a not infrequent wage, as a study of the succeeding tabulations will indicate. It will be noticed that more salaries fall below the $1,528 average than rise above it. The great majority of all annual stipends seem to fall between the $1,200 and $1,600 mark.

One metropolitan institution with three social service workers pays them $1,708 each. They may take luncheon at the hospital if they desire. This hospital has the largest social service staff of any of the institutions listed.

From the viewpoint of financial returns, the hospital dietitian with an average yearly salary of about $1,200

is considerably better off than the director of social service. Dietitians receive, in most cases, full maintenance, which they variously estimate at between $500 and $1,800. The minimum training of the hospital dietitian probably exceeds the requirements for hospital social service, although very frequently the medical social worker has had a liberal education, specific training in social science and some nursing or medical studies. Such academic training coupled with practical work in the field makes a long apprenticeship for the hospital social worker.

For such complete training, the salaries of hospital social workers seem ridiculously low. Whether the hospital has to satisfy itself in many cases with persons of less preparation or whether it is fortunate enough to obtain socially inspired persons who find added compensation in the joy of their work are questions which cannot be answered from the findings of this survey. Either is probably true.

Statistical information on which the preceding generalizations are based may be found in the following tabulation:

INFORMATION REGARDING SALARIES PAID DIRECTORS OF SOCIAL SERVICE IN HOSPITALS

Classification I—Less than 100 Beds

Range of Bed Capacity of 112 Hospitals—20 to 97 Beds

1 to 49 Bed Group

No director of social service.

50 to 99 Bed Group

Eleven hospitals, or almost 10 per cent, of 112 hospitals under consideration.

Average salary director of social service	$1,363
Maximum salary	1,800
Minimum salary	720
Salaries above average	6
Salaries below average	5

Classification II—100 Beds or more

Range of Bed Capacity—100 to 2,700 Beds

100 to 199 Bed Group

Twenty-five hospitals, or approximately 21½ per cent, of 116 hospitals under consideration.

Average salary director of social service	$1,460
Maximum salary	2,800
Minimum salary	500
Salaries above average	11
Salaries below average	14

200 to 299 Bed Group

Twenty-three hospitals, or more than 19 per cent, of 116 hospitals under consideration.

Average salary director of social service	$1,610
Maximum salary	2,700
Minimum salary	900
Salaries above average	10
Salaries below average	13

300 to 399 Bed Group

Five hospitals, or 4 per cent, of 111 hospitals under consideration.

Average salary director of social service	$1,386
Maximum salary	1,800
Minimum salary	900
Salaries above average	3
Salaries below average	2

400 to 499 Bed Group

Eleven hospitals, or 9 per cent, of 116 hospitals under consideration.

Average salary director of social service	$1,881
Maximum salary	2,500
Minimum salary	1,200
Salaries above average	4
Salaries below average	7

500 and More Bed Group

Fourteen hospitals, or 12 per cent, of 116 hospitals under consideration.

Average salary director of social service	$1,489
Maximum salary	2,500
Minimum salary	720
Salaries above average	7
Salaries below average	7

SALARIES OF DIRECTORS OF SOCIAL SERVICE IN HOSPITALS HAVING LESS THAN 100 BEDS

No. of Beds	Monetary Salary	Monetary Equivalent	No. of Beds	Monetary Salary	Monetary Equivalent
50	$1,800	$800	75	$1,500	$780
56	1,020	480	75	960	360
57	1,200	....	80	1,200	....
60	1,800	480	87	1,800	....
72	1,500	400	90	1,500	480
75	720	Dinners			

SALARIES OF DIRECTORS OF SOCIAL SERVICE IN HOSPITALS HAVING 100 OR MORE BEDS

No. of Beds	Monetary Salary	Monetary Equivalent	No. of Beds	Monetary Salary	Monetary Equivalent
		100 to 199 Bed Group			
100	$1,200	$720	150	$1,200	$900
115	1,800	....	150	1,800	Meals if desired
150	1,800	....	150	1,000	1 room
250	1,200	600	150	1,200	....
100	1,200	1,000	150	1,600-1,800	....
117	2,800	....	150	1,800	360
119	1,200	....	150	1,800	One meal
125	1,029.60	....	155	1,800	250
125	500	....	160	1,200	....
125	1,500	480	170	960	480
135	1,200	....	175	Deaconess	550
137	1,800	Expenses	180	1,020	B., R. and L.
140	1,500	1,000	180	1,488	....
142	1,380	....	185	1,200	300
145	1,200	480	192	1,800	....
		200 to 299 Bed Group			
200	$1,500	....	250	$2,100	Lunch only
200	1,537	....	255	2,400	....
200	1,500	$365	250	1,800	....
200	1,200	480	250	1,500	$600
200	900	600	256	2,000	....
200	900	....	267	1,800	400
210	1,708	Lunch only	273	900	600
215	1,200	600	275	1,380	....
225	1,500	Lunches	289	2,700	....
236	1,920	Food	291	1,800	2 meals
240	1,440	B. and R.	295	1,860	Meals only
250	1,500	Laund. of unif.			
		300 to 399 Bed Group			
300	$1,800	....	360	$1,380	$720
320	1,800	Lunch	360	960	400
		400 to 499 Bed Group			
400	$ 900	....	471	$1,000	....
404	1,800	$250	475	1,800	....
446	2,500	....	480	1,200	$500
450	1,800	180	480	1,200	500
450	2,400	324	485	2,400	Lunch only
450	1,200	....	494	1,800	800
450	1,800	....			
		500 and More Bed Group			
500	$1,800	$1,800	1100	$1,708	....
500	1,500	....	1209	1,708	Lunch only
625	1,800	....	1550	2,000	$720
700	720	600	1600	1,400	1,200
770	1,380	....	1837	1,739	....
850	1,200	150	1900	1,500	150
900	1,200	120	2700	1,200	500

A PARAGRAPH IN COMMENT

By IDA M. CANNON, President, American Association of Hospital Social Workers, New York.

Mr. Weber's interesting presentation of the much discussed question of compensation for hospital social workers is timely. Aside from its obvious helpfulness in answering questions that are constantly being asked concerning the present practice, it suggests the necessity of our getting some basis for fair and sound determination of adequate salaries for the service rendered. Most of us who care for proper salaries for hospital social workers care more for standards of service in this field. I would suggest therefore that salary questions be determined in each instance by comparison with salaries in other professional departments of the hospital and a correct estimate of the difference between monetary return to the executive nurse who has maintenance allowance and that to the social worker who properly lives outside. This estimate of maintenance cost should be made on actual cost of living in the community and the cost per person in the institution, which is obviously less. But most important of all seems to me the obligation on the hospital to demand in return for adequate salaries to hospital social workers the personal qualifications and proper professional equipment for this specialized field.

THE FUNCTIONS AND MANAGEMENT OF A SMALL HOSPITAL LABORATORY*

By FREDERICK R. TAYLOR, B.S., M.D., Physician and Clinical Pathologist, Guilford General Hospital, High Point, N. C.

A FEW years ago in many sections of the country clinical laboratory work was looked upon askance as an innovation of somewhat doubtful value. The new clinical pathologist in a town found himself in a position somewhat similar to that of the first man in town who had the temerity to purchase an automobile; in other words, he had to face skepticism and even ridicule until he proved the value of his work. Sometimes, being human, he fell down in his diagnoses or his results for some reason failed to tally with the clinical features of some case, and then the conservative ones would wag their heads and get about as much satisfaction out of his discomfiture as they formerly did when the horseless carriage broke down and the old mule had to pull it back to the barn. Now conditions have changed. In some sections there is actually danger of overrating the laboratory and ignoring its natural limitations.

In discussing this subject, it might be well to start out by noting a few things that are *not* the functions of the hospital laboratory.

To begin with the laboratory is not for the purpose of relieving any physician of careful clinical study of his patients, the taking of thorough histories, complete physical examinations, etc. These things are absolutely indispensable in constructing clinical pictures.

Second, the laboratory is not an imposing collection of apparatus the chief purpose of which is to overawe the lay mind with the erudition of its technicians and the scientific resources of the institution of which it is a part.

Third, the laboratory is not a mere compliance with the *letter* of the requirements for hospitals laid down by this association, valuable and necessary as those requirements are. Nothing that is permanently worth while can have as its chief function the "getting by" of some fixed standard. If, however, the laboratory fulfills the *spirit* of the above-mentioned requirements as well as the letter, it will indeed realize its highest functions.

Fourth, the laboratory's chief purpose is not to furnish some clinical pathologist with an income.

Essential Functions of Laboratory

The laboratory is a workshop with certain definite services to perform,—services to both the patients and their physicians. From the very start, it has four essential functions: first, to give what aid it can in the solving of diagnostic problems confronting the physician; second, to detect by certain routine procedures entirely unsuspected pathological conditions; third, to help in the prognosis of many cases, including the estimation of operative risk; and fourth, to aid in following the course of many conditions and in throwing light on the effects of operations or other procedures attended with any risk to the patients. Later, as the laboratory develops and broadens out, it can be of signal service in performing its fifth function, that of original investigation and research.

Certain routine laboratory procedures seem essential as a minimum in practically all cases. In enumerating these, I take the liberty of quoting from my instructions regarding laboratory specimens used in our hospital. The details, of course, can be varied by different hospitals.

1. All patients entering the hospital and staying overnight shall have a routine specimen of urine sent to laboratory the next morning with the following exceptions: a. When the condition of the patient is such that catheterization is necessary to secure a suitable specimen, such specimen shall be sent only on the order of the doctor in charge of the patient to catheterize. b. Patients admitted on Saturday shall have routine specimens sent to laboratory Monday morning instead of Sunday.
2. Routine specimens of urine shall also be sent from every patient the morning after taking a general anesthetic, with the exceptions noted above.
3. All specimens of urine will be put in sediment glasses and placed on the laboratory with a slip under each glass containing the name of the patient from whom the specimen has been taken. The laboratory report sheet of each patient, with patient's name, date, and case number, will be placed on chart board in laboratory when specimen is sent. Routine specimens of urine will be collected by the night nurse and placed in laboratory not later than 7:30 a. m. Other specimens will be examined only by special request of the doctor in charge of the patient.
4. Specimens of urine sent to be examined before operation shall have their slips marked in addition, "Before operation at..... by Dr. .....," giving the hour of the operation and the name of the surgeon.
5. Only emergency laboratory work will be done on Sundays.
6. All laboratory work other than routine urinalyses will be done only on request of the physician in charge of the patient for whom the work is to be done. Such work, when practicable, will be done in the morning.
7. The clinical pathologist will be notified as soon as possible of all emergency laboratory work.
8. No laboratory apparatus is to be used by the nurses except under the direction of the clinical pathologist.

Laboratory Procedures Employed

Of course a very large number of cases will require much more extensive laboratory study than a simple urinalysis. White cell and differential counts are indispensable in a great variety of conditions. Here let me add that in borderline cases I consider the differential count of more value than the white cell count for the following reasons: (1) It is more delicate than the white cell count in demonstrating pyogenic conditions; (2) it shows things which the white cell count cannot show, e.g., eosinophilia, myelocytosis, etc., besides demonstrating the red cells and showing the changes occurring in them. Where quick emergency action is desired, as in an obvious case of appendicitis admitted at night and the only question is whether operation can be deferred until morning or not, a simple white cell count may be enough, if it shows a high leukocytosis. In repeated studies of the blood to detect an increasing or decreasing reaction to infection, a simple white cell count is usually sufficient, but in ordinary cases the differential count should be made.

In all cases where an anemia of doubtful origin can be suspected, a red cell count and hemoglobin estimation should be made. I would condemn the practice of making a red cell count alone. It is no more valuable than a hemoglobin estimation alone, provided a good hemoglobinometer is used, and takes far more time. Both are necessary to decide between a pernicious and secondary anemia. In cases of anemia due to an obvious cause, such as gross hemorrhage, where quick action is desired, a hemoglobin estimation with a good instrument is enough.

It is not my purpose, however, to go into a general discussion of the indications for all the various laboratory procedures.

Scope of a Small Laboratory

The next question to be considered is the scope of the work of a small laboratory. This should include all work of real value than can be done by the laboratory workers

*Read before the annual meeting of the North Carolina Hospital Association at High Point on January 31.

and that the finances of the laboratory will permit. A few things carefully, conscientiously, and well done are far better than a great number of things poorly done. The laboratory should of course broaden its scope as rapidly as it can do so without sacrificing the quality of the work done. At present our scope is limited. We are doing routine urinalyses, quantitative sugar estimations, routine blood counts and smears, comparisons of bloods for transfusion, coagulation time, sputum examinations, stool examinations, spinal fluid examinations and cell counts, smears from various exudates and discharges, gastric analyses, and phenolsulphonephthalein functional kidney tests. We intend to take up a variety of colorimetric work in the near future, especially blood sugar estimations. As I stated before we are still in our infancy, but we believe we are growing in a healthy manner. Frozen sections, dark field work, typing of pneumococci, blood cultures, the preparation of autogenous vaccines, etc., are all things we are looking forward to doing, but we do not wish to take them up until we can really use them as they should be used. We are entirely satisfied with the state laboratory for our Wassermanns, and consider it poor policy for a small institution to try to do its own.

To be of the highest service to the hospital, the laboratory must be in close cooperation with all the other lines of medical work done in the institution. This absolutely demands, we believe, that a physician be in charge of it. Technicians are valuable assistants, but often peculiar situations arise that can be solved only by a consultation between clinician and laboratory man, the combined knowledge of both being essential. Often the doctor gets a laboratory report and he wants to know its significance. Here is where the limitations of the non-medical technician become evident. Good interpretation of findings is as necessary as good technic, for the hospital laboratory must serve the entire staff, and not only those trained in laboratory interpretation. Furthermore, often good interpretation will discover some error in technic and lead to a repetition of the test to the benefit of all concerned. With competent interpretation the laboratory can serve any and all of the physicians in a community.

To conclude, there are really five prime essentials in the work of the hospital laboratory:

1. Absolute ironclad honesty.
2. Clean reliable apparatus and good reagents.
3. Good technic.
4. Conscientious devotion to the work and ambition to continually improve both the quality and scope of that work.
5. Cheerful cooperation with all the other departments of the hospital.

THE HOSPITAL'S PLACE IN ELEVATING MEDICAL STANDARDS

Education of the practitioner through hospitals and clinics is the surest way of elevating the standards of the medical profession, says Henry C. Wright, director of the Hospital and Institutional Bureau of Consultation, New York, in an article in a recent issue of the *Long Island Medical Journal.*

The hospital's influence and a systematic effort of medical organizations to raise and maintain standards make for slow progress, he declares, but they constitute the most feasible method.

"Maintenance of the recognized standards of medical procedure in hospitals is one of the real problems," says Mr. Wright. "How can the medical service be so organized and operated that the recognized standard will be maintained? Personally I have no great faith in a medical organization that rotates from period to period without some responsible head. Even though there be a medical organization in a hospital that has both good intentions and moral courage to reveal and attack a fault, yet such a medical organization is unlikely to have time or clerical assistance to ascertain what is actually taking place in the hospital.

"From the standpoint of a layman, it seems to me that every effort should be made not only to raise but actually to maintain the standards in hospitals where it is possible to do so through the form of organization and control; then through some organized effort of the medical profession to attempt to educate the field practitioner to adopt and maintain the standards set in hospitals.

"Personally I am strongly in favor of a medical organization for a hospital which has one or a few responsible chiefs in charge of services. Under such an organization, fewer men are on the medical staff. Thus fewer field men have an opportunity for hospital practice. Such a system markedly improves the character of service in a hospital. At the same time it restricts the opportunities of service of many practitioners. How can this handicap be overcome and the higher standard of practice developed in the hospital be transmitted to the field practitioner? This problem has not been satisfactorily worked out, and it is one of marked importance. The standards of hospital practice should not only be maintained but should be heightened, and I do not believe this can be done except that the hospital be served with a comparatively small, well supervised staff. On the other hand it is equally important that the field practitioner should in some way have transmitted to him the knowledge that is gained by the attendings in the hospital. The hospital standards and methods and practices should become his. I see no other way of bringing this about than that it be done through the cooperation of medical men.

"This one thing seems fairly obvious to the layman, that physicians and surgeons do not materially differ in motive and moral fiber from the average layman. There is no particular reason why they should be expected to follow routine rules and regulations any more closely than does a layman. In almost all walks of life, rules and regulations, to be obeyed, must be enforced by some form of punishment. I do not believe that standards created and defined by the medical profession will gain as rapid acceptance as they should unless there be some way of punishing those who do not accept or use these standards. From my experience with members of hospital staffs, I am fully convinced that this is true as applied to hospitals. A certain proportion of the members connected with hospitals needs little or no stimulus to maintain high standards. Others, however, need the constant stimulus of reminders, suggestions, interviews, threats with the possibility of dismissal."

There was once a man, a poet. He went wandering through the streets of the city and he met a disciple. "Come out with me," said the poet, "for a walk in the sand dunes." And they went. But ere they had progressed many stages, said the disciple, "There is nothing here but sand." "To what did I invite you?" asked the poet. "To walk in the sand dunes." "Then do not complain," said the poet. "Yet, even so, your words are untrue. There is heaven above. Do you not see it? The fault is not heaven's. Nor the sand's.—Maarten Maartens.

HOSPITAL FINANCE IN THE PROVINCES*

By C. J. YORATH, City Commissioner, Edmonton, Alberta, Canada

"The common problem—yours, mine, everyone's,
Is not to fancy what were fair in life,
Provided it could be—but finding first
What may be, then find how to make it fair
Up to our means—a very different thing!"

IN DEALING with the subject of hospital finance it is very necessary that a proper and true perspective be drawn of the whole problem of health, how it should be maintained at the highest standard of efficiency and how, when it is run down, it can be restored. To consider only the cost of restoring health and to ignore necessary expenditures upon the maintenance of a high standard of health are not the best ways to arrive at an economical method in maintaining and operating hospitals. If we are to reduce this cost to within our means then we must, in addition, adopt methods which will produce a healthy people and reduce the required hospital accommodation to a minimum.

There is no question that public health is purchasable but should its degree of efficiency be controlled by a situation which demands rigid economy and retrenchment?

The standard of public health should not be lowered by parsimonious methods for after all "the wealth of life is health." But economy or efficiency cannot be obtained by a recognition of the foolish idea, held by some, that money required for hospital accommodation and school education must be provided no matter how wastefully it may be expended.

Today finance is anything but unlimited and we must again, like the Israelites, make bricks without straw.

If a business has to meet an ever increasing expenditure due to defects in its organization, plant or machinery, it is soon found, in order to obtain the best results and to reduce the wasteful expenditure of money, that out of date and defective methods must not only be reorganized and machinery replaced but they must also be maintained at the highest standard of efficiency. The same precautions which have to be taken to keep the mechanical machine highly efficient and to reduce to a minimum the cost of repairs are equally necessary in regard to the human machine, and if we are to advance the prosperity of the province and of this country, then the health of the people must be the first consideration.

Before dealing with the problem of financing our hospitals, the information and particulars incorporated in the table at the bottom of this page, are submitted showing the present cost of maintaining hospital institutions in some of our western cities:

Of the above institutions the hospitals in the city of Saskatoon appear to be in the soundest financial position and the deficit after making due allowance for bad debts is very much less in proportion to population than any of the cities quoted. This is probably explained by its low cost of operation per patient per day. It would appear, therefore, that good business management has something to do with placing our hospitals on a sound financial basis.

The grants paid by some of the provincial governments towards the maintenance of hospitals in their respective provinces during the years 1916 to 1920 as listed in the first table on page 450.

*Read at the third annual joint convention of the Alberta Hospital Association and Alberta Registered Nurses' Association, Nov. 8-11, 1921.

STATISTICAL INFORMATION ON SOME WESTERN CANADIAN HOSPITALS.

Description	Vancouver	Winnipeg	Saskatoon	Regina	Edmonton	Halifax
Population	125,000	192,571	30,000	40,000	60,000	60,000
Hospital	General	General	General and Isolation	General	Royal Alexander	Hospital owned by Prov. Govt.
Accommodation	1,200 beds	.....	150 beds	225 beds	147 beds	170 beds
Total Revenue (1920)	$919,652.38	$605,385	$128,435	$247,759	.....	.....
Total expenditures, including fixed charges	$1,033,249	$719,534	$137,091	$290,087	$265,640	$180,064
Deficit	$153,397	$114,169	$3,656	$39,360	$136,916	.....
Provision for bad debts (1920)	.....	3% of earnings	$10,000	$31,751	$32,497	.....
Total reserve for bad debts	.....	.....	.....	$199,464	.....	.....
Total bad debts on books	$150,000	$20,000	$9,986	$211,678	.....	.....
Cost per patient per day	$3.12 (Excluding fixed charges)	$3.54	$3.06 (Including fixed charges)	$3.63 (Including fixed charges)	$5.06 (Including fixed charges)	$3.42
Revenue per patient per day	$2.78	$2.98	$2.87	$2.89	$4.44 (Ex. F.C. $4.16)	.....
Contribution by Provincial Government (1920)	$159,840 45c per patient	$18,149 50c per day	$22,390 50c per patient per day	$347.46 60c per patient per day	$26,178	.....
Patients during 1920 from points outside city	3,187	5,514	.....	1,925	1,010	1,175
Percentage of patients from outside city to whole	25%	43%	53%	40%	33.5%	66%
Hospital can charge for patients from outside municipality	City of Vancouver allows 60c per patient per day. $161,698, 1920.	.....	.....	.....	.....	.....
	$2.50 per day	$1.75 per day	$2.50 per day	$2.60 per day	.....	.....

The cost per patient in Edmonton, including fixed charges, increased from $3.70 in 1919 to $5.06 in 1920.

Year	Saskatchewan	British Columbia	Alberta
1916	$ 132,000	$ 262,629	$ 92,085
1917	184,142	330,635	88,109
1918	222,989	352,603	97,793
1919	231,358	493,358	105,813
1920	252,889	459,544	185,724
Total	$1,023,378	$1,898,769	$569,524

The province of British Columbia has contributed during 1916 to 1920 toward the cost of maintaining hospitals in its province $1,329,245 more than the province of Alberta and $875,391 more than the province of Saskatchewan.

The deputy provincial secretary of this province also states in a communication dated October 21, 1921:

"We do not make any distinction between municipal hospitals and those established in unorganized districts. They are all paid upon the same scale, which is as follows:

First 1,000 days' treatment	$1.00 per diem
The next 1,500 days' treatment	.70 per diem
The next 2,500 days' treatment	.55 per diem
The next 5,000 days' treatment	.50 per diem
Subsequent treatment	.45 per diem

"For patients suffering from tuberculosis of the respiratory tract we pay $1.00 a day without reference to the number of patients treated in the hospital.

"In addition we occasionally give special grants for building or other purposes.

"I may add that the department now has under consideration a revision of the scale set down above which, if carried out, will mean an increase of the amounts given."

It will be realized from the foregoing that the province of British Columbia not only contributes a very much larger sum towards the cost of maintaining hospitals than either the province of Alberta or Saskatchewan; in fact it contributes more than these two provinces combined, yet it contemplates in the very near future increasing the amount of the contributions.

It will be seen from the statement of comparative hospital statistics that the deficits of general hospitals which have to be provided for out of tax levies represent, in the majority of cases, considerable sums of money; also that the percentage of patients from points outside the municipality which has to bear this taxation varies from 23 to 58 per cent. It must therefore be admitted that general hospitals are not only providing a service for the communities in which they are located but also a considerable service for the surrounding country. It would appear that there is some justification for a request to the provincial government for a larger grant towards the maintenance of general hospitals.

It must be remembered that the larger cities, in addition to providing adequate hospital accommodation for their own and outside patients, also have to bear a considerable expense for other health services which in effect are a provincial benefit. For instance, if the school board provides medical and nursing facilities in order to build up and safeguard the health of the children for future years, the benefit is to the province as a whole and not to any one community. The large expense which a city is put to in treating cases of infectious disease is caused to a certain extent by transients and persons coming in from the country, since it is often impossible to collect the costs of treatment either from the patients or the municipality from which they come.

The total cost to the city of Edmonton for hospital maintenance, public health, etc., in 1920 is made up as follows:

Royal Alexandria Hospital—		
Tax levy	$93,436.76	
Capital charges	32,983.04	
Deficit for year	10,497.01	$136,916.81
Isolation Hospital—		
Tax levy	$36,388.99	
Capital charges	10,644.99	
Deficit for year	20,475.38	67,509.36
Public Health Department		31,478.82
Public school board's expenditure on medical, dental and health inspection		19,950.00
Grants by city council to private hospitals and other organizations for attending the sick		16,375.00
Total cost of maintaining and restoring health		$272,229.99

It will be realized from the foregoing what health service costs in the community, and we should be correct in making the following deductions:

(1) That the provincial government is not contributing its fair share towards the cost of maintaining hospitals.

(2) That there is a waste of public money due to lack of centralization in control of all health service.

(3) That the best service is not being obtained for the money expended, due to lack of coordination.

(4) That through the lack of coordination all is not being done which should or could be done to maintain the health of the community so as to reduce to a minimum the necessity for hospitals for the restoration of health.

It is a comparatively easy way to overcome one's financial difficulties by suggesting that someone else carry the burden. The provincial government probably has financial difficulties of its own and will find it very hard to increase its contribution towards the maintenance of hospitals. Nevertheless, as it is not so much a question of endeavoring to shift the burden as more equitably to distribute the same, it would appear that the larger municipalities where every convenience and scientific appliance are provided for dealing with major operations, not only of the citizens in the community in which the hospital is located but also for patients from outside points, would be justified in making this request upon the provincial government.

The Free Hospital League of Calgary suggests that hospitals be supported on a tax basis, that $1.00 per day for general and semi-ward fees be allowed the hospital per patient, and that all fees be abolished for diagnostic and clinical facilities and for the surgical ward and supplies.

It will be realized from the statement of hospital statistics, which shows the deficits of some hospitals varying from $8,656 to $136,916 and with present revenue from $2.78 to $4.16 per day, what a very great increase will have to be made in the tax levy in order to cover the expenditures of such hospitals with a revenue of only $1 per day.

It surely must be realized that local taxation is already as heavy as taxpayers can bear and if hospitals cannot be made self-supporting then revenue must be obtained elsewhere. It will be also noted from the statistical statement that the hospital in Halifax is entirely supported and maintained by the provincial government.

It is suggested that the financing of our larger hospitals would be simplified if the provincial government

maintained and operated general hospitals in a few of the larger centers where patients could receive free treatment; all other hospitals would have to be self-maintained by charging fees adequate to meet their expenditures.

That free treatment should be provided for those who cannot pay the very high hospital charges of today will be conceded by all. It is an undisputed fact that poor people cannot afford to be ill, and in consequence a comparatively slight ailment, through lack of treatment, will eventually develop into a very serious illness often resulting in a major operation and afterwards a ruined physical condition. Such a state of affairs cannot be allowed to continue if we wish to maintain our self-respect and if we wish our communities and our provinces to be built up on the higher social ideals which have been recognized since the war.

If the cities and provinces cannot afford, with their present sources of revenue, to bear this increased burden of expense then some other source must be found, either by a direct hospital or poll tax or, by part of the revenue now derived from the amusement tax being devoted to this purpose.

In addition to finding other sources of revenue to finance present hospital expenditures and to provide free hospital service to those who cannot afford it, there are also the other necessities of consolidating health service and expenditures so that 100 per cent value will be obtained for every dollar expended and reducing hospital expenses by prevention of disease.

It is suggested that all matters of public health and hospital accommodation should be consolidated under a local health council consisting of the city council with a number of co-opted members whose duty would be to control and govern:

(a) The sanitation of the community.

(b) Baby and child clinics.

(c) School medical inspection, health nursing, physical culture.

(d) General and isolation hospitals.

Public health is an important public utility and like all other utilities cannot be maintained at a high standard unless under the supervision of an expert. Why should not the work of a public health department, public school boards, clinics, hospitals, etc., be concentrated under one experienced head similar to the superintendent of any other public utility? Some persons appear to hold the extraordinary idea that better efficiency will be obtained by creating innumerable boards. Such boards are usually a failure because in the majority of cases the individual members have neither the time nor experience to deal with such matters.

The Free Hospital League of Calgary suggests that all health activities be coordinated into one department under the mayor. Can anyone imagine what kind of efficiency and continuity of policy would be obtained under a system which might have a new departmental head every year with probably no experience in health matters?

The following phases of public health should therefore be consolidated under an experienced health superintendent:

I. **Maintenance of Health or Prevention of Disease.**
Under this heading would be consolidated:

Sanitation	Health department. Health and school nursing.
Clinics	Charitable and other clinics taking care of babies and children before school age.
Medical inspection of children	The school medical and dental departments.
Physical culture	The city and school athletic and physical culture institutions.

II. **Restoration of Health.**
Isolation and general hospitals.

The expenses in connection with facilities for restoration of health would depend upon the success which would be attained in preventing disease and ill health. If all the phases of public health were directed by an experienced supervisor, many cases which now seek and obtain relief at our public hospitals would never reach that stage because they would receive adequate and proper treatment from nurses experienced in hygiene and public health.

It is not necessary for me to point out to a convention composed of trained nurses and medical men of considerable experience the importance of the child clinic and the advantages to be obtained from physical culture. The money expended upon these two services will be repaid a thousand times by the money which it will eventually save by reducing the number of patients to be treated at our hospitals. It is not sufficient to provide for spasmodic lessons in physical culture in our schools. If we want to be a strong, virile race, organized sport and recreation must be provided not only for the boys and girls while they are at school, but also for young and middle aged men in business. Community gymnasiums and swimming pools with properly trained instructors could easily be made self-supporting by charging a small fee.

While economy and retrenchment are absolutely necessary in all branches of municipal, provincial and dominion governments, it would be false economy to restrict to too great an extent expenditures upon public health, yet it must be realized that full service is not being obtained for the money expended, through lack of centralization.

While the government of this province, like the city administrations, will plead lack of funds, the province of British Columbia has found a source of revenue which will produce a revenue of $3,000,000 per annum and which will enable it to make larger contribution to its hospitals.

This revenue is obtained by the government controlling the sale of liquor.

Hospital Revenue from Liquor Sale

No one today would advocate or desire to see the same conditions re-established as obtained before the so-called prohibition legislation was enacted into law, but at the same time it must be realized by all those who are observant that a condition of affairs exists today which should not be tolerated by any self-respecting community. Some druggists and others are making large profits out of liquor, which would probably equal, taking the province as a whole, the amount of revenue which is now obtained by the provincial government of British Columbia. In addition, the liquor which is being sold is of such poor quality that is very detrimental to the health of those who drink it. No country has yet been able successfully to establish absolute prohibition and if it were possible to stop the importation of liquors into the province, something infinitely worse and more harmful would take place, —stills.

It would be very much better, therefore, if the sale of liquor was controlled by the government and any revenue which was derived from its sale be set aside as a special fund to improve the health and hospital conditions of the province rather than allow a system to continue which allows a few to make enormous profits.

The building up of the health of a community and the providing of adequate means for physical culture will be far more likely to bring about the results of temperance and total abstinence than any hypocritical system of prohibition.

Health and cheerfulness make beauty.—Cervantes.

NURSING AND THE HOSPITAL

Conducted by CAROLYN E. GRAY, R.N.,
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THE GROWTH OF HOSPITAL LIBRARIES

BY EDITH KATHLEEN JONES, GENERAL SECRETARY OF THE DIVISION OF PUBLIC LIBRARIES, DEPARTMENT OF EDUCATION, MASSACHUSETT; FORMERLY LIBRARIAN, MCLEAN HOSPITAL, WAVERLY, MASS.

ALTHOUGH the American Library Association War Service did not originate the idea of hospital library work, it did demonstrate to the country at large the value of books as recreational, educational and therapeutic factors in hospitals, and of all the civilian welfare organizations which, during the war, operated in camp and hospital for the benefit of our soldiers and sailors, there is none which has more justified itself, made more lasting impression, been more thoroughly absorbed by the government into its peacetime organization and more enthusiastically carried over into civilian life than this hospital library service.

Before the war, the number of organized libraries in hospitals and sanatoriums might have been counted on the fingers of one hand. Books they had, gifts, discards from attics, old bound magazines, usually covered with brown paper and hidden away in linen closets or storerooms; but a mere collection of books never yet made a library. McLean Hospital, in Waverley, Mass., a private hospital for mental cases, was the first to insist on the value of a carefully selected library for its patients with a trained, resident librarian in charge; but, aside from its model library, its chief claim to the honor of being the pioneer in this work is that it formulated the principles governing the organization and administration of hospital libraries. These principles, gathered from its experience, are: first, an organized central library, as charming and homelike as it can be made; second, a librarian with personality, knowledge of books and library technic; third, an annual appropriation sufficient for the purchase of new books as they are published; fourth, the exclusion of morbid, gruesome and unwholesome literature.

A group of happy convalescents in a U. S. Veterans' Hospital (Base Hospital, Camp Travis, Texas).

McLean Hospital reorganized its library along these lines in 1904 and its librarian began to publish her theories and experiences in 1910. In these same years the Massachusetts General Hospital in Boston also blazed a couple of signs along this trail, for in 1904 it, too, reorganized its patients' library, appointed a librarian and became, so far as is known, the first general hospital to institute regular book service to bed-patients. This service became so popular that some means had to be devised to carry the books to the wards in greater numbers, and, in 1910, trustees and doctors put their heads together and designed the little "bookcart" which, eight years later, was amplified and enlarged into the A. L. A. hospital bookwagon that trundled miles and miles of war hospital corridors carrying its welcome loads of adventure and romance to thousands of sick and wounded men. This indispensable adjunct to a properly equipped modern hospital as originally designed is made just wide enough to pass between the cots of a ward and just high enough for the patients to reach the books while lying in bed. These essentials are also features of the A. L. A. book wagon, but the latter has two trays instead of one, each holding fifty books, is longer, heavier and has larger wheels.

Great ideas generally seem to be born twins or triplets and this patients' library idea was triplets. In the same year that the Massachusetts General was discovering its value and work out the theory that McLean was beginning to the right kind of books might be a decided help towards recovery in cases of mental illness, the secretary of the Iowa Library Commission, Miss Alice S. Tyler, happened to visit one of the state hospitals for the insane and was appalled by the hopeless, aimless way in which the patients just "sat around" with nothing to occupy their minds. It seemed to her that the library commission might get books to these state institutions as well as to public libraries, and then, finding, as McLean

and the Massachusetts General Hospitals already had discovered, that books alone are useless unless there is someone to make the connection between the book and the patient, she interested the legislature to authorize the appointment of an institution library supervisor. Thus was born the state institution library idea. Vermont, Minnesota, Nebraska, Indiana and one or two other states quickly followed Iowa's lead, some of them operating through the state board of control and some through the library commission. Realizing that few state institutions can afford the "unit" system employed by the two Massachusetts hospitals,—that is, the development of their own libraries under salaried librarians, these states devised the "group" system; that is, they appointed the librarian to organize all these libraries, select proper books, circulate traveling libraries, and train in someone,—doctor's wife or nurse or patient—to act as librarian in each institution under her supervision.

A few years later the American Library Association appointed a committee with a very long name which is generally known as the Institution Library Committee. Under its auspices the A. L. A. Publishing Board issued "A Manual for Institution Libraries" by Carrie E. Scott and (in 1913) "A Thousand Books for the Hospital Library" edited by Edith Kathleen Jones. This list is now out of print, but the A. L. A. hopes to publish an entirely revised edition supplemented by much new material early in 1922. This committee, though its work was interrupted during the war, is still in existence and endeavors to interest state and county institutions in the need of adequate library service in hospitals and prisons.

Supplying the Soldier's Book Demands

When the war broke out, this was the hospital library situation: a few states had learned to operate them in groups; a few private hospitals had discovered the value of recreational reading as a therapeutic agent and the advantage of carrying books to wards so that bed-patients might make a selection themselves, what books were wholesome and to be recommended, and how to interest patients in reading. Therefore, when in the spring of 1918 the government allowed the A. L. A. War Service to place women librarians in the base hospitals, all this knowledge lay ready to hand and the association had only to organize its forces along lines already mapped out. Miss Caroline Webster was placed in charge of the hospital department, field representatives were assigned to certain territories and librarians were established in the large army and navy hospitals. The next thing was to get the books demanded by the men, and, well, we who were inside the hospitals remember the entreaties in those early days for Zane Grey and Harold Bell Wright and Tarzan of the Apes! Unknown to many librarians, scorned by many more, these and their kind were the only recreational books the sick boys wanted and these they read with avidity. When they became convalescent they turned with equal avidity to treatises on machine guns, aviation engines, navigation, automobile trucks—but nothing between the two extremes would they look at! And on the day following the armistice the whole army and navy threw education to the winds and went on an orgy of Zane Grey. And him they still demand, together with Curwood and Raine and other tellers of tales of the great west and the far north.

The Sioux City fleet of hospital book wagons.

The hospital library at Ellis Island. Immigrants who are given the best books of a country immediately upon arrival should make good citizens.

As I write of those days of the A. L. A. War Service, my mind goes back to those brave, eager, warmhearted, merry lads, setting forth with such high faith and courage on what was to them a great crusade. I see an embarkation hospital in May, 1918; the boys chafing at the delay in getting over, tender with one another, courteous and helpful to us women, appreciative of what we were trying to do for them, longing so much for a little mothering—just *boys*. I remember those hospitals under the awful scourge of influenza that fall, when the boys died all around us, when those of alien birth forgot their English in their delirium and, as one interpreter said, "called for their mothers in every language under Heaven." At Camp Devens the library was turned into a morgue, but in all the hospitals the librarians stuck to their posts and, often with gas masks on, wheeled the book wagons through the wards or presided over outdoor tables of books for convalescents.

Library Service to the Wounded

No one who lived through them can ever forget those days in the New York hospitals when our first wounded were brought home. Another of my memories is of the hospital ship which sailed up the river to the Navy Yard in Charleston, S. C.; the long line of ambulances and stretchers bearing the men to the hospital, the joy of the men to be home again, the raid upon the library that Sunday afternoon by every man who could get over on crutches or in wheeled chair, and the cries of delight which hailed "the booklady" when the librarian and two orderlies loaded down with books appeared in the wards.

And then, in those hospitals filled with gassed and wounded soldiers, we began to be aware of a difference. Those lads whom we had sent overseas to fight our battles,

merry, lighthearted idealists, wearing youth like a gay cockade, had returned men—their youth irrevocably gone, and always something of somberness and pain and never-to-be-forgotten horror in their eyes. Shattered in health, crippled, often with a mental twist, and with wrecked nerves, more than ever they called for books. Adventure and romance they wanted, to still for a time remembrance and suffering; books on every trade and profession under the sun to help them learn to earn a living in a changed world where they would be handicapped by wounds and disease; poetry for inspiration; history and travel and science for education. The book wagons were busy in those first days of peace, and they have grown busier ever since as the number of men in these hospitals has steadily increased until there are now 30,000 ex-service men under treatment in the U. S. Veterans hospitals alone.

June 1919 found 145 librarians and six supervisors in the A. L. A. War Hospital Service in America and 121 organized hospital libraries in France. In November of that year the A. L. A. gave up its work with the army and navy, turning over to them all libraries and books and personnel in those departments, but continuing its service in hospitals for disabled soldiers until November, 1920, when, for lack of funds, it was obliged to suspend this work. However, so great was the protest from commanding officers, patients and nurses over the threatened loss of their libraries that the Red Cross came to the rescue and financed the salaries of the librarians until the A. L. A. was able to assemble sufficient funds to pay back the loan and carry on the work until July, 1921, when the government assumed the responsibility. In the spring of 1921 Congress appropriated $100,000 for the purchase of books and magazines for the beneficiaries of the war risk insurance, and the comptroller of the treasury, under which department the veterans hospitals are placed, later ruled that funds might be expended for personnel to select these books and administer the libraries in these hospitals. Under just what terms and by whom these libraries will be operated is not known, but there is little probability that the work will be given up. The medical officers speak in the most emphatic terms of the value of books and the professional spirit of the librarians who are able to get the men to read really worth-while things and in some hospitals to organize course of study. The Public Health Service is stressing medical as well as general libraries in their hospitals, and the librarians will be expected to administer both of these.

So much for the A. L. A. library service in the war hospitals. It demonstrated the value. What has been its influence on civilian hospitals?

Civilian Hospitals Awake to Need

Doctors and nurses returned from the army to their home towns, remembered the organized libraries and selected books, the bedside service, and the contented patients of war days and wondered why something of the sort would not work in city hospitals. Librarians who had served in the camps looked at the full shelves of their home libraries and remembered how much "the boys" had liked those books when they were sick. So one of these librarians went to the superintendents of the six general hospitals in his city and offered to start a "drive" for permanent collections of books for each hospital, lend books from the public library, and provide a hospital librarian from his staff who would visit the wards and carry books to the bed patients. Everyone was enthusiastic, six book wagons of the A. L. A. pattern were bought, and Sioux City became the proud pioneer in the new type of "group" library administration whereby the hospital and the public library combine to furnish books to patients. Many other cities and towns have followed this plan with satisfactory results.

This "group" system is undoubtedly the better method of providing book service in small hospitals, but the "unit" plan as followed by McLean, Bloomingdale, Butler and Shepard and Enoch Pratt mental hospitals and the Massachusetts General, Barnes and Lakeside hospitals for general and surgical cases, is without question the ideal one for large hospitals which can afford it. Each of these hospitals has its own medical and general libraries, funds for buying new books and a librarian attached to the staff. Lakeside Hospital has also a very fine collection of books on nursing and allied subjects for the use of its training school, and it draws heavily upon the Cleveland Public Library for supplementary reading, talks to nurses on books, and cooperation in every way along these lines. At McLean Hospital, before the war disrupted the training school, courses on books and reading and on fine arts were given by the librarian to the nurses as a part of the curriculum.

Therapeutic Value of Books

As the value of hospital libraries is now fully acknowledged, their future seems assured. The superintendent of one general hospital remarked: "These libraries are wonderful things for the patients. We doctors used to think that when we had performed a successful operation our duty was ended. If the patient died of homesickness after it, that was none of our concern. We knew that a contented mind was half the battle, but we took little pains to make him contented. Now we have learned that the hospital must look after the mental health of a patient during convalescence, and we have learned that wholesome books do more than almost any other one thing to keep him happy and help him get well."

If there were space enough I might tell of the book service in one of these big general hospitals; of the children eager for picture books and the story hour; of the foreigner, whose eyes light up pathetically at sight of his own language on the printed page; of the student enabled to keep on with his classes through books borrowed from school or public library; of the rough mechanic who begs for an Alger one day and an abstruse book on machinery the next; of the sailor who frets for the smell of salt water till Conrad's "Nigger of the Narcissus" and a book of Japan are put into his hands; of the blind man, tossing restlessly, lips moving, face tense and strained, hands clutching the rods of his cot, who relaxed completely when "Treasure Island" in braille was given him. The work is so intensely human, so full of pathos and humor, there is little wonder that librarians engaged in this service are an enthusiastic group.

The war experience taught these librarians many things, but the fundamentals as formulated by McLean Hospital long before the war remain unchanged. We still insist that the books must be wholesome and interesting. We see more clearly than ever that hospitals must provide proper books for its nurses and employes in order to keep up the morale. And most emphatically we stress the need of experienced librarians to organize and operate these libraries. We know, too, that the most efficient librarian in the world can do little unless she has the hearty support of superintendent and trustees and definite funds at her disposal for the books she wants. Books are her tools. Give her these and she can build a library which will be one of the best therapeutic agents in the hospital.

THE SCHOOL OF NURSING IN THE SMALL HOSPITAL

By GRACE H. CAMERON, University of the State of New York, Albany; Member of Board of Nurse Examiners, New York

IF WE accept the present-day definition of the hospital's function—the care, cure and education of the sick; the training of physicians and nurses; the advancement of medical and surgical knowledge; and the prevention of disease—then the hospital must truly be the health center of the community. This the small hospital can be as well as the large.

Generally conceived, the small hospital is an institution of from fifty to 100 beds, averaging forty to seventy-five patients daily. It is the hospital of the small town and the surrounding rural community. Or occasionally it may be found in cities with a clientele from a limited area.

From these smaller hospitals come many of our nurses. They are not unlike the product of the big nurses' training school, for the woman who is graduated by the large or small training school should possess essentially the same knowledge.

Nurse Has Wide Choice of Service

Nurses' training seems the best preparation for many positions young women are filling today and even in the legitimate field of nursing they have a wide choice of service. Sir Auckland Geddes says that "without expert nursing, half—no three-fourths—of the practical value of the scientific knowledge of the medical profession would be lost." By expert nursing is not meant the care of the sick alone; the nurse today is invaluable in the laboratory, in research work, in social service in the classroom and executive office.

Whether it is advisable for a small hospital to maintain a school for nurses depends on several factors, such as its ability to furnish adequate equipment, prepared teachers, ample clinical material and facilities for recreation.

In the first place the school of nursing must be recognized as a teaching unit, not as a cheap method of obtaining hospital service. Too, it must offer special inducements to counteract the attraction of large centers and the prevailing tendency to despise the small, even though efficient, hospital.

How, then, may the small institution attract students? This brings us to a consideration of teaching material and equipment. No matter how small the hospital if there can be offered a staff of well prepared teachers, full equipment and adequate clinical material, there will be no lack of students. Of primary consideration is clinical material—surgical, medical, obstetric and pediatric patients. Frequently the small hospital has so active a service that a student has the care and observation of as many types of cases as a larger institution could furnish her. It is not the number of beds which determines the teaching possibilities but the number of acute cases. Chronic and convalescent cases, of course, have very limited value as teaching material.

Individual Room is Due Student

Furnishings and equipment in the small hospital must conform to the accepted standards. This does not mean that they need embrace all the latest mechanical devises and the most expensive furnishings, but they should be commensurate with the work to be done. If the hospital is in a remote country district, then the equipment must be more complete; in districts where isolation is not a factor several hospitals can combine certain phases of classwork and practice.

Quarters for nurses should include separate bedrooms for each individual, a bath and toilet for each six students, social rooms for general use and special classrooms. The student of nursing has every right to demand an individual room. After the stress of a day spent with abnormal persons, and in study and recitation, she needs a quiet restful place for relaxation and sleep. This can rarely be obtained if there is another occupant in the room. Two persons are not apt always to want to do the same thing at the same time.

If possible nurses' quarters should be in a separate building. In it the whole first floor may be given over to reception and sitting rooms, classrooms and possibly teachers' quarters. The classrooms should include laboratories with the necessary equipment for instruction in chemistry, bacteriology and dietetics; a regulation classroom with charts, models, outlines and reference books; and a larger lecture room which may also be a demonstration room where the student is instructed in the methods of practical procedure.

Recreation Facilities Should Be Adequate

Recreation rooms should be large enough for social gatherings. This may often be accomplished by the installation of folding doors between several smaller reception rooms. If possible there should be a gymnasium in the basement where basketball, indoor baseball, bowling and other games may form a welcome diversion for the student nurses. Directed physical exercises do much to promote the health of the school.

Sleeping porches and roof gardens are being added to many nurses' homes recently built. In planning for student's quarters, the size of building is always regulated by the number of hospital patients. The general opinion is that the ratio of nurses to patients should be 1-5 day service, and 1-10 night service in the large wards; and for private rooms, 1-3 day service and 1-5 night service. However as stated in *The Standard Curriculum*: "The ratio of students to patients cannot be worked out on any basis which is capable of general acceptance because of the many and various factors entering into the situation." It is better to build for more than the present requirement, for all progressive hospitals grow.

Superintendent Should Not Teach

The selection of the teaching staff needs very special and definite deliberation. Nurses are professional women and so must have professional training. This cannot be given if the superintendent or principal conducts the greater part of the classwork, with a few scattered outside lectures whenever the visiting doctors have time to give them, and if she supervises the practical work and arranges for clinical observation. The superintendent of the school, however small, needs all her time for administrative and executive work. Today all recognized schools have a graduate dietitian to teach food values and composition. She may preferably be a resident, having charge of the feeding of the hospital family as well as the teaching, or she may come at stated times for classwork both in theory and practice cooking. The study of

chemistry and bacteriology must be directed by a qualified teacher. Chemistry classwork can often be arranged at the high school, if the students have not had a preparatory period in a university department, and if there is no instructor qualified to teach the subject. The bacteriologist, either resident in the hospital or employed by the county, may give additional lectures and practical laboratory work if so desired. There should be in the small nursing school one regular instructor whose whole duty it is to prepare for general classwork and teach; an assistant to the superintendent, who may take charge of demonstrations and the supervision of the practical work, assist with the office work and with the training school records; and a night supervisor who continues the work of the practical teacher. This staff—principal, assistant instructor, dietetian, and night supervisor—is essential to a well conducted school. The medical staff may and do often give excellent lectures on advanced work. They should be paid for their work and so held to time and preparation.

The number of students which should be in training in the school at any given period has been noted under the planning of quarters. Whether the student should receive a remuneration must be argued and decided by the hospital authorities and those responsible for the administration of the training school. Many schools are asking an entrance fee and placing the school on a level with other teaching institutions, giving only room, board, uniforms and laundry. This is the best method. But as so many schools still give a monthly allowance this question must be decided by the individual hospital.

Eight Hour Day for Nurses

Administration of the training school for nurses goes hand in hand with organization, for if the hospital has equipment for organization, and the teaching staff, there remains only the systematizing of work and time for the development of the school. Much has been said about the hours of duty, and able discussions of the subject have been heard and read. The eight hour day is the only feasible plan, if the hospital is to have a class of live students. Admission requirements and the length of training must be those suggested and required by registration boards, and differ, at the present time, in each state. An increasing number of schools are requiring full high school work and admitting younger students.

The work both theoretical and practical is usually divided into four periods—preliminary, first, second and third year. The best schools today are recognizing the advantage of a longer preparatory period. Four months at the beginning of the course is none too long for intensive study. During this period the minimum of time is spent with the patient and the student is almost wholly occupied with classwork and practice of procedures. The fundamental principles of the science of nursing including anatomy, chemistry, bacteriology, drugs and solutions, and dietetics must be comprehended in these few weeks. Fortunate is the school near enough to affiliate with the department of nursing in a university!

Exact and detailed records of each pupil should be so filed as to be easily and quickly obtained for reference. By a systematic use of these cards each student is rotated regularly and gains equal practice in the different wards and departments of the hospital. Each superintendent must arrange these services according to the size and activity of the hospital.

As to discipline, the old order changes. With the advance in training comes progress in government. Students in many training schools are practically and efficiently governing themselves. In other schools a committee composed of interested women acting with the superintendent prescribes the regulations as to conduct, social events, comfort etc. It will depend altogether on the students whether they undertake the character building student government plan or refuse the responsibility and accept the control of a committee. For without the *positive* interest of the student body, student government cannot be successful.

There are both advantages and disadvantages in the small school. The life is more home-like; physically the work is less arduous because of smaller buildings and fewer patients; and there is a personal knowledge and intimate contact between the student and the school staff not possible where the numbers are large. The nursing care, too, is apt to be more personal and sympathetic, since the nurses have more time to devote to each patient. The danger in the small institution is that because of lack of pupils and lack of funds for the proper maintainance of the school, exploitation of the pupils may result. This cannot be if there is the proper teaching staff and a conscientious carrying out of agreement. Even if the equipment be meager and the hospital isolated, the principal and her assistants can most effectually assist in the development of the student by the organization of clubs, by personal supervision of her reading and by arousing interest in outside matters. Special study in nursing history and progress is more easily attained with a smaller number of students, and a foundation of loyalty to, and becoming pride in her chosen profession may be more solidly built. There is great opportunity for the right woman who undertakes the management of a small school; to live with, to instruct, to watch, to develop, and to direct the unformed aspirations of eager, enthusiastic, adventurous young women is a peculiarly delightful and satisfying job.

WHY IS NURSING A PROFESSION?

One of the present day cries is that "nursing is a profession." It is, but is not made so merely by stating the fact. A trade grows into a profession when it begins to have ideals and a soul, and when the members of that trade are united in the effort to attain the one and express the other, says a member of the San Francisco County Nurses' Association. The real members of the nursing profession are women of high ideals and broad vision, and it is too bad that nurses of smaller vision sometimes give a wrong impression to the rest of the world. One nurse, when asked if there were a future in nursing, replied by telling the enviable state of a nurse friend of hers who had a position with a wealthy family which did not need her services, and which lavished so many presents upon her that she was able to put most of her salary in the bank. Women of the type who could hold such an ideal of service as this are being taken into hospitals today because the hospitals must be run. But the only women who can uphold the ideal of the profession are women who have the power to think for themselves, and a vision broad enough to grasp the social, economic, and political aspects of life as it is.

"It is a very common error among the well to think that with a little more self-control the sick might, if they choose, 'dismiss painful thoughts,' which 'aggravate their disease.' Believe me, almost any sick person who behaves decently well, exercises more self-control every moment of his day than you will ever know till you are sick yourself."—Florence Nightingale.

DIETETICS AND INSTITUTIONAL FOOD SERVICE

Conducted by LULU G. GRAVES,
Supervising Dietitian, Mt. Sinai Hospital, New York.

THE DIET OF NERVOUS PATIENTS*

BY SYDNEY KUH, M.D., RUSH MEDICAL COLLEGE, CHICAGO

THE belief is very prevalent that there are certain foods, notably those rich in fats and in phosphorus, which have a specific beneficial effect upon the group of functional nervous diseases, i.e., neurasthenia, psychasthenia and hysteria. I know of no scientific data which would justify such a belief, nor does our bedside experience give it any support. It probably owes its longevity largely to those whose interests prompt them to keep it alive, that is, to the manufacturers of patent nostrums and proprietary drugs.

In spite of this, diet is of importance in the management of these maladies, for if we know nothing that has a primary beneficial action there are very frequently complications present, sometimes the cause of the nervous condition which demand imperatively certain restrictions in the patient's dietary. There is furthermore a group of stimulants, not strictly speaking food, but nevertheless all too commonly a very important part of our diet which require consideration.

Every layman knows of the harmful effect of coffee and tea in large quantities, while as to the advisability of permitting alcohol there is still some difference of opinion. There are certain considerations to be taken up a little later which often justify us in permitting coffee and tea in moderate quantities. Never should either be given late in the day, if the patient's sleep is at all disturbed. To this rule there is one exception: a considerable number of those, who suffer from migraine, will get relief from the severe pain during the attacks from only three remedies—strong coffee, opiates and headache powders. The latter are not always safe; their harmful influence upon the action of the heart is well known; they are also not always effective. That then in certain cases is the choice between a narcotic and coffee. Since the disease is usually incurable, the remedy will have to be given during many years and the danger of establishing an opium habit is correspondingly great. Those patients demand relief from their suffering and of those two remedies even a strong cup of coffee is certainly the lesser evil. Unfortunately it too will not infrequently fail to bring the desired relief.

Of some little importance seems to me a difference in effect of coffee and tea upon the emotional state of a few —though not all—persons. The former has a tendency to excite, to create a feeling of depression, of restlessness or apprehension if taken in larger doses, while the latter has very often a pleasant exhilarating and stimulating action, a difference which deserves consideration.

As to alcohol, there is, as I have already said, a difference of opinion. On the one hand we know that with many it has a decidedly cheering influence not to be despised as a help in cases of mental depression, even though it give only temporary relief. We know too that there are many who after a glass of beer or wine will have a quiet and restful night, when without it they fail to get the desirable amount of sleep. Surely such a small quantity of a mild alcoholic would be preferable to a regular dose of some sleeping powder. But we know too of the danger of establishing a habit in neurotic individuals, a danger much greater in them than in those whose nervous systems are normal. The patient need not know when he is taking a hypnotic, and it can be made impossible for him to continue its use after the need for it has passed, but the flavor of wine or beer is too well known to be disguised. Could we have any assurance that our patients would be satisfied with the small doses, which alone we are justified in ordering, then, and only then, could we safely rely upon alcohol in these conditions. This is not, unfortunately, always the case. I have never been free in advising the use of stimulants and with growing experience have used them less and less. In the vast majority of cases they undoubtedly do more harm than good.

Since I have been asked to discuss the significance of diet in social problems and I know of no other article of diet which has such a significance, perhaps this may be the place to say a word about the importance of alcohol in this respect. It is not my intention here to hold forth about the economic and moral effect of alcoholism and to bore you by a repetition of well known facts. But a new situation has arisen within the last few years, all of the results of which are perhaps not quite so well known. We now have nation-wide prohibition which does not prohibit. There has been under the new laws no material decrease of nervous disease due to alchoholism. Undoubtedly the amount consumed is somewhat less than formerly; the economic waste, however, has not been materially decreased since the price is a great deal higher and the effect of the home brew is a great deal more harmful than that of the old article, bad as that was.

The worst feature of the new law, however, has been in effect upon those women who formerly satisfied their craving for stimulants with whiskey. Now finding it difficult to obtain, they are taking, in increasing numbers, to the habitual use of narcotics and other substitutes a

*Read at the annual meeting of the American Dietetic Association in Chicago, October 24-26, 1921.

great deal more harmful. And this is not surprising. Had our legislators gone to the trouble of making a study of the experiences of other countries following attempts at regulating the use of alcohol, they would have known that what happened was sure to come. Do not misunderstand me; I am not opposed to prohibition, but I am emphatically against the present travesty on prohibition with its disastrous effect upon the honesty of our public officials and upon the health of the community.

In ordering a dietary it is always important to bear in mind the fact, brought home by experience in institutions particularly, that a monotonous diet, though it contain ample nutriment, may in course of time lead to loss of weight, to anemia and even to tuberculosis. Another element of great importance in this respect are psychic influences, potent factors in the assimilation of foods to all of us, doubly important in the neurotic individual with his greater susceptibility to such factors. It did not require the famous experiments on dogs to teach us that lesson. We all know from personal experience how our appetites are influenced not only by the method of preparing foods, but almost equally by the way in which they are served. With many of us, too, it makes a great difference whether we take our meal in the presence of congenial company flavored by lively and interesting discourse, or alone. When we are worried or depressed even the best of food fails to appeal to us, and if we eat anyhow it is liable to cause us more or less discomfort which means that it is not being properly assimilated. These considerations, as I have already stated, are of special importance in our nervous patients.

You are in the habit of studying the results of your dietary regime by weighing your patients. To check up by this method too frequently in the neurotic is often distinctly harmful, because it gets the mind of your patients upon their illnesses and because they are very liable to be worried by such slight fluctuations as are well within the range of the normal.

Diets to Cure Digestive Disturbances

Many nervous people show distinct evidence of undernourishment. They are thin and anemic, have a poor appetite or complain of other symptoms suggestive of gastrointestinal disturbances. There are here two possibilities. In some instances a primary digestive disturbance leads secondarily to nervousness; in others the so-called "nervous dyspepsia" is but one of the symptoms of the underlying morbid condition. With modern laboratory methods there should be little difficulty in deciding which malady is primary. Where we deal with the first of these possibilities, a strict diet depending upon the exact type of the primary illness is of course indicated. In the second group a modified Weir Mitchell rest cure with overfeeding will usually give the best results. Only rarely is an attempt made in these days to follow accurately the directions given by the author of this method. He ordered an exclusive milk diet for the first few days, followed by a very restricted regime with, again, a great deal of milk, of fats in other digestible forms, etc. These strict rules of Weir Mitchell with their very limited list of permissible foods have long since been found impractical for the majority of cases. The greatest possible variety is desirable, because with it the patient's appetite will be at its best as will his ability to assimilate the largest quantity of food.

Since the treatment is used particularly with patients who are underweight, we use butter very freely, not only spread on bread, but also in the preparing of sauces, soups and vegetables and in the cooking of meats. Fat meats are less desirable because of their tendency to decrease the appetite. The yolk of eggs is a very useful part of the diet in these cases, since it contains a very large percentage of fat in a very easily assimilated form. The most important thing to be borne in mind is that the more we consider—within reason, of course—the individual likes and dislikes of our patients, the greater will be the total amount of food taken and the more rapid the desired gain in weight. It is a safe rule to permit such patients all those varieties of food, which a sensible, healthy person would take, with the proper emphasis upon such elements as their physical condition would indicate. A great deal of harm is done, I am convinced, in many cases of so-called nervous dyspepsia by too restricted a diet. Not only do we in this way decrease the patient's appetite, but we encourage by such measure the tendency to hypochondrical ideas, the most distressing symptom in a great many of these cases. It is for this reason that I desire to make all possible concessions to the patient's likes and dislikes that I often permit him coffee and tea in moderate quantities.

Suitable Diets for the Epileptic

Another belief held by many today is that a meat-free diet is of great value in the treatment of epilepsy. Years ago I repeated this simple experiment a number of times: An epileptic would be permitted a reasonable amount of meat for a period of time and then be put on a meat-free diet. I have still to see the first case in which a moderate amount of meat increased the number of attacks in the least. There is another method of treating such cases of more recent origin which seems of very decided value. It is based upon the experience that by decreasing the amount of table salt given to our patients in their food, we can distinctly increase the effectiveness of the bromides, the one group of drugs which is most helpful in limiting the number of seizures. At first a salt-free diet (or rather one as nearly salt-free as it is possible to make it) was recommended, which consisted of milk in unlimited quantities, fruits of all kinds and bread. In the preparation of the latter bromides were used in measured quantities in place of the chlorides. By ordering our patients to consume a definite quantity of bread in a given period of time, we could quite accurately regulate the dosage of bromide. This diet was effective, to be sure, but it proved quite impractical. Not only did a great many of our patients very soon rebel at the monotony of it—and worth while results are not obtained in epilepsy excepting by treatment continued for a very long time—but we soon learned that the quantity of milk necessary to maintain a balance was definitely contra-indicated in a considerable number of cases, as for instance in those with complicating heart lesion or gastroptosis, and that in a fairly large percentage the necessary amount simply could not be assimilated. We now permit our patients a mixed bland diet with the following restrictions: all foods are to be prepared without the addition of salt; meat is permitted only once a day and in moderate quantities then; with each meal three or four grams of table salt are served. This amount the patient may use, as he wishes, in the seasoning of his meal. With the sodium chloride already contained in the various foods, this is sufficient for the needs of the body.

A careful consideration of any idiosyncrasy of an epileptic is important, since experience teaches that any stomach upset, however slight, is liable to bring on an attack. Most of them eat very heartily and very rapidly, and it is fully as important to regulate the quantity of food and to see to it that it is properly masticated as to

control its quality. If there be a tendency to constipation that too must be taken into account in the patient's menu.

There is only one other type of nervous disease in which diet seems of direct importance; that is hyperthyroidism. Here, if the condition of the heart permits, a great deal of milk should be given. The practice, in use some years ago, of administering the milk of thyroidectomized goats is now of historical interest principally, since we have much more convenient and pleasant methods of accomplishing the same results. And while we are on the subject of endocrine gland disturbances, it might perhaps be well to say a word about another therapeutic measure which I had considered obsolete until I was surprised to read only a few days ago that it was to be revived. That is the feeding of the endocrine glands, such as the thyroid, to mentally defective children. This method, too, may well be considered obsolete, since the same effect may be obtained by giving the desiccated glandular substance, a form which is both more palatable and convenient and has the further important advantage that it permits of easy and accurate regulation of the dosage.

In cases of mental disturbance it often becomes necessary to resort to forced feeding, to introduce nourishment by means of the stomach tube. Here we are naturally limited as to the kinds of diet available. The foundation is always milk of which about one quart is given at a time. We add as a rule eggs, two being the usual number, about two ounces of sugar, or, if the patient be constipated, sugar of milk and about thirty grains of table salt. If with this the patient loses weight, the milk can be in part replaced by cream, butter may be added and the amount of sugar increased.

This is a brief review of what seemed to me of importance in the management of the diet of nervous patients. The type will be determined in the majority of instances not so much by the character of the nervous trouble proper, as by that of the underlying or complicating physical ailment. To attempt to discuss all of such possible complications would mean to cover the entire field of dietetics, obviously an impossibility at this time. One point, however, I have attempted to emphasize and I shall in closing refer to again. The tendency to have an absolutely fixed type of diet for certain diseases has led to a harmful restriction of choice. Whenever possible, the patient's likes and lislikes should be consulted. In other words, we should attempt to treat the patient, rather than the disease, a rule which I consider of great importance in the management of all cases but of the greatest value in the management of the neurotic.

NEWS ITEMS

"At the Chicago meeting of the American Dietetic Association it was decided by all Ohio dietitians who were present that we organize an Ohio Dietetic Association to hold its meetings twice annually," says Miss Bertha M. Hyde in a report of Ohio activities in the field of dietetics. "Miss Bess Brinton of Lakeside Hospital, Cleveland, was elected president with the power to appoint chairmen of committees to draw up the constitution and by-laws and to assist in the general organization of the association.

"It was later decided to have meetings in sections in different parts of the state before a meeting of the whole association should be attempted for the purpose of creating interest and enthusiasm for the association. Miss Brinton appointed me chairman of the section which had Cincinnati as its center. Twenty-five letters were sent out from this center, which were rewarded with five replies one of which was a regret.

"The date set for our meeting was February 21. I am glad to say that there were present eleven enthusiastic persons, two of whom were student dietitians, the other nine in active dietetic work. Miss Brieman, Mercy Hospital, Columbus, met with us and brought plenty of 'pep' from that section to our group. The other eight dietitians were Cincinnatians. Three of those present had attended the Chicago convention.

"The purpose of our meeting was to create enthusiasm; and apparently it was accomplished. Everyone seemed glad of the opportunity to meet together. There was felt strongly a need for greater cooperation among dietitians, and a desire for a local organization was expressed by several. This idea will be worked upon and the institutional section of the Cincinnati Home Economics Association, which for several years has dropped out of existence, will be revived.

"We of Cincinnati are glad to have done our bit and sincerely hope that the state association meeting will be many times larger and more enthusiastic than was ours. It is a splendid movement and should be given the hearty cooperation of all red-blooded dietitians."

"The Minnesota Association of Dietitians met on February 9 at the U. S. Public Health Hospital, The Aberdeen, St. Paul," according to a report of Miss Sigrid Skurdalsvold. "The program consisted of a talk by Miss Wood, in charge of the home demonstration work in nutrition in the St. Paul schools, and by Miss Gilbert, in charge of the same department in the Minneapolis schools. There was a report from the executive committee of the National Dietetics Association given by Miss Peterson.

"Election of officers took place and the following officers were chosen for the coming year: President, Miss Margaret Drew, The Northern Pacific Hospital, St. Paul; vice-president, Miss Janet Marson, U. S. Public Health Hospital, Minneapolis; Secretary, Miss Grace Moreland, The State Hospital for Crippled Children, St. Paul; treasurer, Miss Dorothea Olmey, The City and County Hospital, St. Paul; corresponding secretary, Miss Sigrid Skurdalsvold, Norwegian Deaconess Hospital, Minneapolis.

"The February meeting of the Chicago Dietetic Association was held at the Hospital Library and Service Bureau on Friday, the 17th. Mr. Maughn of the National Dairy Council gave a very instructive talk on the dairy industry. Both the wholesale and retail phases of the subject were explained. An interesting discussion followed," writes Miss Elizabeth H. Tuft, secretary of the association.

Miss Esther Funnell is in charge of the diet kitchen at Lakeside under Miss E. M. Geraghty. Miss Eggut who was in charge of the diet kitchen is now supervising the entire kitchen. Miss Funnell was formerly at Harper Hospital, Detroit.

Miss Martha Russell has accepted a position as dietitian at Bridgeport Hospital, Bridgeport, Conn. Miss Russell was at one time acting dietitian at Cincinnati General Hospital.

Miss Elizabeth Powers, who was at Mercy Hospital, Council Bluffs, was recently married to Mr. J. R. Williams of Omaha.

Miss Eleanor Muth has given up her work at Ohio Valley General Hospital, Wheeling, W. Va., and gone to her home. Miss Alice Ferguson succeeds Miss Muth at Ohio Valley General Hospital.

Miss Gertrude Oehmig is developing a dietary department at Shreveport County Hospital, Shreveport, La.

Florence Roller has been appointed dietitian at Lakeview Hospital, Danville, Ill.

RUNNING A TEA ROOM*

By AGNES GLEASON, Manager, Parkway Tea Room, Chicago

PERHAPS the most helpful way to discuss the management of a tea room is to imagine one's self answering the questions asked by one who is thinking of establishing such a business.

College women frequently come to me as a pioneer in the tea room business to ask how to go about establishing a business of their own. They are well equipped with education in home economics which our colleges and technical institutes are so wisely giving. Tea room management looks easy. People always tell them there is money in food.

These are some of the points I would have the aspirant consider:

1. Do you love the ordering or preparing of food to please the eye and nourish the body? If you do, that is a good foundation.

2. Have you had any experience in preparing food? A domestic science course is an asset, though not absolutely essential, but you must have a knowledge of the composition of foods which will enable you to handle them safely.

3. The question is usually asked: "How much capital is required, to begin on a moderate scale?" I answer: "There is no such thing as a moderate scale today." The word "moderate" will soon have to be eliminated from our dictionaries for it has no equivalent. The amount of capital needed depends on your choice of location. Rents differ widely in different places. One-third of the amount you have at your disposal should be kept in bank. A rainy week, when receipts fall off, will spell much worry if there is no reserve fund.

4. Location is important, especially in the beginning. Mr. Childs of the famous chain restaurants says in the November *American Magazine* that location is the biggest factor in the success of a popular-priced restaurant, with physical equipment second and management third. He is speaking, of course, from a somewhat different standpoint than ours. I should be inclined to put management first. Emerson says that the man who can make a better mouse trap than anyone else will be found out, even if he is in the depths of a forest, but most people cannot take the time to hunt your tea room up, even though you serve the best meal if you are on the second floor or in a basement room. Try to get on the street level.

Good Food Is First Consideration

5. An interior decorator will be helpful, especially to the beginner. I have in mind a resort tea room, conducted for the benefit of a college fund which owed much of its popularity to a clever decorator who transformed an ugly cottage into a chic little tea room. But remember no matter how attractive the dining room is, your patrons come to you primarily for food, and their return depends on how well you satisfy them in this respect.

6. As to equipment, my advice would be: "Buy cautiously." If you visit a store devoted to the equipment of restaurants, you will be told that you *must* have this or that, but wait and see for yourself. Buy only essentials (and these of the best) and add other equipment when you find it needed, bearing in mind that it is better to have a balance in the bank than a bill on some one's books. Don't over-buy in the beginning. The stores will always be there.

7. Perhaps one of the greatest assets in this business is an open mind and a willingness to learn.

8. The young woman who is anxious to start a tea room often says: "I believe I could do it, if only I could learn about the buying of food." My reply to this is that, while it is important to purchase properly, it is still more important to merchandise your food successfully, after it is purchased. It is well always to buy the best, but the great art is to sell to the best advantage. Overhead, that is, wages, replacements, rents, heat and light, must come out of the proceeds of the food you sell and you must know how to gauge the cost of the portions you serve.

For instance, a twelve-pound turkey should serve twenty-four people. The foods that go with such a dinner must also be properly proportioned and you must know the cost of these portions if you are to know what profit you will make. This holds good in all food sold. How many portions are there in so many pounds of this or that? Proper portioning is a very essential thing.

In my tea room I do my own buying, and we have a daily cost system of expenditures and receipts, the average being made from this. In the matter of table linen we have effected a saving, although we give fresh linen with each service. We use a square just the size of the table.

Choice of Personnel

9. The kitchen is, of course, the heart of the establishment, and success must emanate from that point. The ideal kitchen is sunny and well-ventilated. In my establishment, owing to the ten-hour law effective in all restaurants, I have to find a way to live up to that requirement. I have a group of women who come on duty at five o'clock in the afternoon, replacing three others, whose time expires at that hour. These fresh workers go on with the dish washing and later clean the kitchen and dining room, which are thoroughly scrubbed every night so that they are spotless for the workers to enter next morning. I find there is a psychological effect on those who work in the kitchen if they can come into a clean, sweet-smelling place in the morning. My kitchen is not perfect in its arrangements because the building was not planned for the purpose but it is as well planned as is possible under the circumstances. If I were building, I could make it more compact. A small kitchen is a labor-saver.

My office adjoins the kitchen, and here supplies are kept and requisitions and menus made out. My employes are: a forewoman who, with the help of a porter, receives and weighs all supplies as they come in, and issues them as they are needed. She also supervises the serving of the food to the dining room; (b) three cooks, besides the pastry-cook; (c) three dishwashers, who, because a dish-washing machine is used, also help in preparing vegetables; (d) two laundresses (we have our laundry done on the premises as it saves carrying a heavy stock of linen); (e) fourteen waitresses; (f) two cashiers; (g) a head waiter.

I prefer women for waiting on table as it promotes the home atmosphere, but I have had both men and women for superintending the work and have been equally satisfied with both. At present, I have a man for head waiter.

*Read at the annual meeting of the American Dietetic Association, Chicago, October 24-27, 1921.

Between 600 and 700 people are served daily in the tea room.

We have said that the kitchen is the heart of the place, but its efficiency would be much impaired without a well-ordered dining room, where the food is appetizingly served. A maxim often repeated in our tea room is: Food well-cooked and intelligently placed before the guest is sold. By intelligent service I mean service by women quick in action, neat in appearance and quiet in deportment.

Welfare of Workers

Much more thought is now being given, and rightly, to the welfare of the helpers when they are off duty. We have a restroom in which they can lie down and rest or read when they have time.

It is well to carry liability insurance for the staff of workers, and this is usually done by the group insurance plan which we employ in our tea room. However, that protection should not relax your vigilance on behalf of the welfare of your assistants for whom you are responsible.

Start the day right. It is always well to be on hand before your helpers arrive in the morning or to be represented there by some reliable person whom you have trained in your methods. I believe in keeping my assistants and I never wait for them to ask for an increase in salary.

The young woman who wishes to learn the tea room business may well enter the employ of some one who has been successful and learn his or her methods. Thus she will avoid costly mistakes.

There are many difficulties in the business of serving food. I have recently heard of a hotel proprietor in a large summer resort who said that she had not had a complaint during the entire season. I could only conclude that she had some tactful assistants who kept these complaints from her knowledge. Perfection is our goal, but we can hardly expect to attain it on earth.

In my tea room we do have complaints, and they are always welcomed. I say to my helpers: "Don't tell me the compliments you hear about the service here. They will take care of themselves. I want the complaints." All complaints are carefully considered, and I have found the method of calling all together who might be concerned and presenting the complaint to them as I have received it more effective than taking the matter up with the individual.

These are some of the problems of the administration of a tea room—the difficulties. But there are compensations:

1. You form friendships with highminded people whom you meet from day to day.

2. You have the satisfaction of feeling that you are filling a definite place in the community.

3. You have the joy of achieving a big thing, and it seems to pay for everything when your patrons come to you and say: "This is really wonderful. How do you do it?"

4. The successful tea room means financial independence for its owner.

Here are a few "don'ts" for the managers of tea rooms.

1. Don't fail to look into the ice box in making up your daily menu. "Left-overs" have a direct relation to "turnover."

2. Don't be too penurious with your cook. Food must be well cooked in order to sell well and to cook it well, one must use generous amounts of butter and cream, and other expensive ingredients that go to make a perfect dish. Yet, while we advocate generosity, waste cannot be tolerated. You have not only a right, but a responsibility, to know all that is going on in your business. Here genius in administration is almost a necessity, but when this knowledge is thoroughly acquired, much trouble and friction are avoided. Remember, it is your right to investigate every detail of your business in spite of temperamental spirits in the kitchen. In fact, it is the only way in which you can find the real value of the individual employe.

3. Don't fail to keep in mind the requirements of your guests. In my tea room, the popular thing is a table d'hote service, offering a three-course luncheon for sixty cents and dinner for a dollar. But some people want a la carte service—a chop, or steak, salad and dessert. I make these work together and merchandise some of the same articles in each branch of the service.

4. Don't forget to have frequent conferences with your workers. These should be as often as weekly, sometimes daily. If you find one girl is not doing her work as you like, you can frequently correct this in a conference, not mentioning her specifically but stressing the importance of doing such and such a task in the right way. The great pleasure in work comes from doing it a little better than the average, and the best service we can render our assistants is to exact the best from them and reward accordingly. It has been my experience that if the one in charge of any business has an earnest purpose and attacks the work seriously and with deep interest, his or her helpers catch the spirit and work in the same way.

Remember we, the heads of an enterprise, create the atmosphere, and we must take the consequences. It is reflected in our place. Our assistants absorb it. They fairly eat it up. It radiates to our patrons and is just as sincere, serene, tense, generous, penurious, particular, improvident, careful, careless, slovenly or capable, as is our thinking regarding our enterprise.

Like any other force, it cannot rise higher than its source. Sometimes we are so engrossed with building a business that we fail to perceive that we are building something infinitely more difficult to undo when we discover a mistake in construction—a character. We cannot administer a business and leave ourselves out of it. I have little patience with those who consider business a feature of living where different ambitions and ethics prevail. Business is living, and there is no better opportunity for displaying our ideals than the enterprise which sustains us.

5. Don't forget that the price of success in this business is hard work, vigilance in detecting and banishing waste, learning to bear heavy responsibilities without breaking under the strain, and willingness to forego most social pleasures in the beginning, until your business is established and your bank account warrants a little letting-up. Your work will be constantly on your mind and the day is long. You cannot take time to form friendships outside your business. But all this does not mean that you must become a one-sided person. Have a hobby that does not take too much time. Keep the play spirit alive, and if you cannot take time to golf, at least you can indulge in a brisk walk or a visit to an art gallery to refresh your soul. It is perspective we need, and when we are too near a situation we find our view is foreshortened.

6. Don't be too intent on money-making to let slip opportunities to set others in the way of progress. Have your helpers an ambition to do greater things? Help them on. No one truly prospers by keeping others back.

7. Don't worry too much over trifles. Keep a light heart, remember that all has worked out well in the past and trust that it will do the same in the days to come.

Hospital Equipment and Operation

With Special Reference to Laundry, Kitchen and Housekeeping Problems

Conducted by FRANK E. CHAPMAN, Director
Mt. Sinai Hospital, Cleveland, Ohio

HOW TO MAKE GOOD COFFEE

THERE will always be wide variance of opinion as to what constitutes good coffee and what is the best process to follow in its making.

Coffee forms an important part in the hospital dietary and hospital superintendents and dietitians will be greatly interested in the results of a research study conducted by Prof. S. C. Prescott of the department of biology and public health at the Massachusetts Institute of Technology. While Prof. Prescott's findings are not complete, a preliminary report has been issued.

From experiments conducted, it is indicated that a large majority of persons "prefer coffee which has not only been not brought to the boiling point, but which has been prepared at a temperature considerably below this point."

Prof. Prescott's experiments covered the effect upon the flavor of beverage coffee of various metals. His conclusion, based upon actual tests with a number of consumers, is that the majority prefer coffee prepared in a glazed pot, which includes utensils of glass, porcelain, vitrified earthenware or agate ware, and not brought into contact with tin, copper, aluminum, silver or other metal. "It is fairly obvious," he says, "that many of these metallic substances yield pronounced flavors when covered with an organic solution such as coffee infusion. This is particularly pronounced in the case of certain metals, and seems to be most marked with tin, tin-plate and copper."

Method of Preparation

In describing how he prepared the coffee which the majority of his test subjects liked best, Prof. Prescott says: "We find that it is desirable to bring the water to a boil, then remove the source of heat for a moment or two and then add the coffee. This will bring down the actual temperature of reaction to a point below that at which the severe chemical change takes place. Do not start with water at the temperature desired for reaction."

The investigator sums up his conclusions as follows:

"The opinions we have arrived at with reference to the making of good coffee may, therefore, be summarized by the statement that the filtration (or drip) processes yield a clear good coffee if made with fresh materials and with the right conditions of time, temperature and utensils. In our experience the use of those percolation processes in which the ground coffee is constantly subjected to repeated treatment with the hot water, or coffee infusion, yield much less desirable results and are, in fact, far from satisfactory. *Long-continued heating processes or those in which the coffee is actually subjected to boiling are even worse in this respect as they bring into solution bitter or astringent substances and drive out of solution the fine aroma which can only be obtained by retaining the evanescent ethers and volatile oils.*"

The full text of Professor Prescott's report is as follows:

In the report of a year ago, I attempted to give a resumé of the collected data on the physiological effect of caffein, the characteristic ingredient of coffee. Neither our investigations nor the published work of other workers has led to any change of opinion in this regard. But caffein is not the whole of coffee, and there are other ingredients in its composition on which the literature gives us little light, and scientific accuracy demands a much more thorough investigation of coffee as a whole than has yet been made.

During the past year we have been concerned with researches into the composition of the coffee bean after roasting and with the study of the numerous factors bearing upon the preparation of beverage coffee, which we believe have immense practical interest, not only for the coffee roaster but also for the housewife and the ultimate consumer as well. These I propose to discuss one by one, as I think the results will thereby be more clear-cut and convincing than if an attempt is made to generalize too hastily, or to combine too many factors in a single statement of our conclusions. It is perhaps unnecessary to state that we have endeavored to study the whole subject without bias or preconceived desire to prove special pet theories, but to arrive at opinions based on a solid groundwork of observed facts.

Our work for the year may therefore be regarded as having two distinct parts, one purely chemical in character, the other essentially concerned with the practical mechanics of coffee-making.

Further Studies on the Occurrence of Caffein

As I pointed out last year, many determinations of caffein have been made by different observers, using different methods and arriving at results somewhat at variance. A comparative study of the methods has given us the explanation of some of these results. Study of the roasted coffee, when extracted with various solvents, has given various amounts of caffein, more or less mixed with other ingredients. Furthermore, unroasted coffee may similarly be shown to present variations, although it is evident that the total amount of caffein existing either free or combined in coffee is essentially the same before and after roasting.

For example, less caffein may be removed from medium roasted coffee by use of ether than by chloroform, and similarly the total amount of organic matter dissolved

varies with the solvent. If a sample of coffee be ground, divided, and each portion treated with an organic solvent, each one will give a certain quantity of caffein, but apparently no one will extract it all. If a portion be subjected to consecutive treatments with solvents suitably selected, each will put out from the ground coffee its own quota of this substance. If, after completing the extraction with a single organic solvent, the residue is boiled with water a further residue of caffein is obtained. By following out this method carefully we have been able to show that the total amount of caffein in the coffee which may be removed by *all* solvents is the same as the quantity which may be obtained by use of boiling water, but none of the solvents will take out as much as water alone. If now we take pure caffein and study its solubility in the solvents used, we find that all of them will dissolve it readily. We are therefore brought to the important conclusion that caffein exists in coffee not only in the uncombined or free state, but also in certain combinations which may be removed by the use of our solvents, and especially by boiling water. To what extent the breaking of these combinations is accomplished solely by the action of temperature, is still unknown, but it is evident that this may be the case, as will be discussed later in speaking of beverage coffee. If so, the effect of the high roast may be of very great importance, especially in view of the possibility that these unbroken caffein compounds may have a very important bearing on the known coffee idiosyncrasy of certain individuals or on the effect on sleeplessness of which some people complain.

Even at temperatures as low as 185 degrees F. a large proportion of the caffein is removed by water in a short treatment, say two minutes. Our figures indicate that about 80 per cent of the total caffein is dissolved in this length of time at 100 degrees, and it is possible that nearly as much is removed at the lower temperature. It is therefore of great importance to discover if caffein-compounds, split up by boiling, yield substances which are prejudicial or objectionable, and a study on this phase of the subject is now being conducted by Dr. Mendenhall, head of the department of physiology at the Boston University Medical School, using certain substances of waxy or oily nature which have been prepared in our laboratory.

Caffein forms very few additional products with organic substances, and in this respect differs from the alkaloids. It may, however, form compounds with metals and on this point some very important considerations of a practical nature may be based. It has recently been found that caffein may unite with mercury compounds or salts, giving a characteristic product, and to assume that other metallic compounds are possible is not improbable. The practical side of this will be discussed later.

Leaving caffein, we may consider briefly other important components of coffee, the oils, waxes and resins and the ethereal compounds which give the delicious aroma to a properly prepared beverage coffee, or to freshly roasted coffee. In our work we have obtained these oils, waxes and resinous substances, but at present have no definite knowledge as to the extent to which these bodies may come from the bean or from the chaff. The oil is small in quantity, yet a very important ingredient from the standpoint of taste and aroma. It is volatile and evanescent, thus explaining why ground coffee goes "off flavor" on standing. By reheating such coffee, it may be temporarily improved in aroma as the heat expels the oil from the inner cells and brings it to the surface. The same result has been obtained by keeping coffee in tightly sealed glass jars where the oil appeared in small drops on the surface at points of contact with the glass. In open containers this oil would be lost by evaporation. The quantity of oil is so small that large amounts of coffee must be used to obtain sufficient quantity for analysis and identification, yet the minute amount makes a great difference in the aroma of beverage coffee. The quantity in a cup of coffee is so infinitesimal, however, that it can probably not be regarded as having important physiological action. This may not be true of the waxes and resins which occur in much greater quantity, and which are also under investigation in the experimentation of Dr. Mendenhall.

Much has been written of the *caffetannic acid* of coffee, and erroneous ideas have sometimes been fostered as a result. Coffee contains nothing of the *gallotannic acid* type, such as occurs in tea leaves, oak bark, hemlock, etc. In other words, coffee will not *tan*. That there are bitter or astringent principles present in coffee is well known, but the nature of them is not yet known. *These are removed by boiling.*

From the practical standpoint it is at once evident that these findings *may* have a very considerable bearing upon the process of roasting and that substances which are conceivably objectionable in green or low roast coffees may be broken up or destroyed by the application of high heat and longer roast. In this way it would be possible to account for differences which are said to exist in the coffee used in tropical countries and those which have a more ready demand in the temperate zones and especially in the more northern latitudes. It is also evident that any consideration of this matter opens up a new field for investigation on the whole general subject of the changes which take place during the roasting process. These we hope to be able to study after we have carried the laboratory experimentation to a much more advanced stage.

Studies on Beverage Coffee

The original plans of the investigation authorized by your Research Committee called for a study of the factors concerned in the making of beverage coffee, especially the character of the water, temperature of brewing, time of treatment, method of preparation, character of container or pot used. The changes produced by the addition of hot milk, cream and sugar were also regarded as worthy of study.

At the outset it must be emphasized that the individual preference, or taste, plays a very important part in arriving at an opinion on matters of this sort. Some individuals have a keen taste perception, while with others it is not acute. Furthermore, it is likely to be influenced by training, habit or experience, so that those who have long been accustomed to a particular style of cooking or a characteristic method of preparation of any food substance unconsciously tend to select the flavor to which they have been habituated as the most desirable. This fact, combined with the facts that taste, flavor and aroma cannot be made the subject of exact quantitative estimates, makes it necessary to replace the individual opinion by a group opinion or popular vote in arriving at a decision as to what is "best" in the public mind. We have, therefore, in these practical studies on coffee-making attempted in every case to test our individual opinions as to quality by checking it against such a group opinion, or rather by becoming units in such a composite group.

Observations previously made had indicated that the factors of temperature, quantity of coffee used, fineness of grind, character of the coffee-pot, and time of infusing would be most important, and we have therefore carried out many comparative experiments in which one factor

alone was varied, all the others remaining constant, or as nearly so as is humanly possible. By this means direct comparisons are obtained, and conclusions reached absolutely free of individual bias. Some of these conclusions we believe to be of very great importance in the movement for "perfect coffee." With the particular variant known to but one person, a series of coffees is prepared, and while fresh and hot tested and compared by a group of individuals of intelligence and ability to discriminate. No discussion is permitted during the test, the report of preference or quality being designated on a slip of paper which is given into the custody of the coffee maker. When the whole group has reported the individual opinions are tabulated and the popular preference is indicated by the majority vote. While the groups have in general been small, say of ten to twenty individuals, the total number of different persons has been about sixty, and the repetition of the tests has been undertaken as a control measure. It cannot be claimed that a single test of this sort is always conclusive, therefore it is our purpose to make constant repititions, with much larger numbers, before announcing opinions as final. The results of the tests made have great value, however, as indicating the general trend of opinion as to what constitutes quality in beverage coffee, and as suggesting methods for improvement in coffee-making and increasing the popularity of the beverage.

Effect of Water

While it is most probable that in case of very hard or very alkaline water, the character of water used for coffee-making may have an important effect on the quality of the beverage resulting, our experiments with distilled, hard, medium and soft waters of both ground and surface origin in the New England districts have not given conclusive results. There are so many factors of greater importance in their effect on beverage coffee that we must regard the difference in water in New England, at least, as trivial. With mid-western waters this is probably not the case, and we have been hoping to receive samples of the more difficult types of water supplies for study.

Our results indicate that waters containing considerable amount of alum or of chlorine, as well as waters which are excessively high in alkali might affect the results adversely in the preparation of coffee, but there are many other factors concerned as will shortly be pointed out. One of the most important factors pertaining to the preparation of coffee seems to be the temperature employed to prepare the extract, or in other words, at which the coffee infusion is actually made. Practically every analysis of coffee conducted in the past has been made on an infusion prepared with boiling water. Our experience in the laboratory has brought us to the conclusion that a very deep-seated change takes place when ground coffee is heated with water at a temperature approximating boiling water. If medium or finely ground coffee is added to water at the boiling point, a slight lowering of the temperature takes place, amounting probably to 3 or 4 degrees C. or perhaps 6-8 degrees F. At this temperature there is a marked physical change in the appearance and an action which may be perhaps most easily described as simulating effervescence takes place. Vigorous foaming ensues, gas bubbles are formed and pass off and there is every evidence that a chemical change of complex character takes place. Just what happens cannot be positively stated, although our studies on the determination of caffein suggest strongly that the compounds of caffein which occur in the bean may here be undergoing decomposition. It is possible also that changes in the protein substances of the bean are also brought about. This change seems to occur at a temperature somewhere between 95 and 100 degrees C., or a few degrees below the boiling temperature. If now we make an infusion of coffee at temperatures below this point the chemical action which results is far less vigorous and the resulting coffee infusion retains all the fine flavors, and is freer from certain bitter or astringent flavors than that which is made at the higher temperature. This is important in making coffee.

In order to determine whether this effect of temperature produces a marked change in the quality of beverage coffee, we have carried out an extended series of practical tests, using the groups of individuals as our subjects for determining popular opinion in the way which has been previously described. In general, it may be stated that a fairly large percentage of consumers prefer coffee which has only *not* been brought to the *boiling temperature*, but which has been prepared at temperatures considerably below this point. We have compared, for example, coffee actually made at a temperature of 85 degrees C. (185 degrees F.), coffee made at a temperature of from 90-93 degrees C., about 200 degrees F., coffee made above 95 degrees but below the boiling point, coffee which has been brought to the boiling point, and coffee which has been boiled for brief intervals such as a minute and one and one-half minutes. In a large majority of cases, the preference is for the coffee made at the lower temperatures, whereas coffee made at boiling temperatures, or coffee which has actually boiled for a short time has been looked upon with comparative disfavor. The importance of this to the housewife, the restaurant keeper or hotel is evident. The practical application of this will be worked out.

Critical Temperature in Coffee-Making

Vigorously boiling water has generally been accepted as best. We find that it is desirable to bring the water to boil, then remove source of heat for a moment or two and then add the coffee. This will bring down the actual temperature of the reaction to a point below that at which the severe chemical change takes place. Do not start with water at the temperature desired for reaction.

Now the practical application of that, it seems to me, is just here; it means that if we want to get a coffee which pleases the popular taste, it is very important to have the actual infusion with the coffee made at a temperature a few degrees below the boiling point. We believe that there is what we may call a critical temperature in coffee-making, and that that critical temperature is below the point at which this effervescing effect of which I spoke takes place. When that effervescence takes place, chemical changes go on in the coffee and that permits the solution of more of these astringent or bitter substances which go in the solution.

In the past it has been generally stated that vigorously boiling water should be used in making coffee. We find that it is desirable to bring the water to a boil and take away the source of heat for a moment; if it is on a flame, take it away from the flame for a moment or two; if on steam, turn off the steam for a moment or two and that will bring about a depression of your temperature just a few degrees, just enough to bring it down to that temperature which is desirable.

Rules to Control Temperature

That can be worked out and will be worked out in a practical way, and I believe it will be possible for us soon to develop a set of rules, if you want to call it rules, by which the desired temperature can be absolutely con-

trolled, and there will be no guess-work about it. Of course, I want you to get this matter of temperature straight. I don't mean that you should mix the water at 185 degrees with the coffee, but the point I want to make clear is that the mixture of the water and coffee together should be below the temperature of 200 degrees if you want to get the better quality of coffee, a few degrees below the boiling point. If water is brought to a boil, and then the source of heat is taken away for one or two moments, you will get that lowering of temperature which is desirable and which will prevent the breaking up or the effervescing of the coffee when it is added, giving it more undesirable (I won't say objectionable) substances.

Furthermore, of course, at the lower temperatures you will save a good deal of the aroma-giving substances which are very volatile and which pass off very quickly at the higher temperature.

It has long been known, of course, that coffee not only contains caffein, but that it contains other substances. The medical men have talked a good deal about caffein, and very frequently advised their patients to abstain from coffee, apparently forgetting the fact that tea also contains caffein in just as large amounts, or even larger amounts in some instances, and absolutely the same substances that occur in coffee. It is, however, a fact which can be demonstrated that there are many people who can drink tea with impunity who cannot drink coffee.

It is important from the standpoint of the making of coffee to find out why that is, what substances are in coffee, for example, which may have this effect, not on any great group of individuals, but on the occasional individual. We have undertaken these animal experiments to determine if there are substances which are taken out of coffee in the process of infusion, which do have depressing action upon the heart or kidneys, or any other form of action which might be objectionable, and which may explain the reason why some people cannot drink coffee regularly without undergoing a certain amount of discomfort.

Animal Experimentation Begun

I have therefore obtained Dr. Mendenhall, who is at the head of Pharmacology at Boston University, and an expert in his field, to undertake the physiological side of this experimental work.

I may say that a preliminary report from Dr. Mendenhall states that "the experiments thus far carried on are preliminary in nature and definite conclusions cannot be drawn in the present state of the investigation. However, the results obtained thus far indicate that there is nothing harmful or toxic in nature contained in the products that have been investigated. I can make no further report at this time as to the state of experiments that are under way in which verification of the above indications will be sought, and enough evidence obtained to warrant definite conclusions."

Dr. Mendenhall has not yet been able to test all the different substances which we have prepared for him, but this work is going on as rapidly as it can be pushed and we believe is going to lead to some very important conclusions.

Obviously, the results we have obtained in the study of the preparation of coffee at temperatures below the boiling point open up a relatively new field and may be looked upon with skepticism by those who have been accustomed to the ordinary methods of preparation of beverage coffee. I wish, however, to state emphatically that this phase of the work will be extended and studied with greatest care in order that no conclusion not warranted by thorough study and multiplicity of experiments will be reached. That the temperature of the water plays a very important part in the character of the resulting beverage is so apparent from the results we have already obtained that I believe there is little danger of erroneous conclusions being drawn.

We shall give to Dr. Mendenhall for experimentation products which have been extracted from coffee at the boiling point, using the method which has been most commonly employed in the past, and also products which we obtain at these lower temperatures, because it is very important to find out whether the substances which may possibly be objectionable are produced in much greater quantity at the boiling point than they are at the lower temperature. Of course, our assumption—if I may call it an assumption—is that they are likely to be increased very much by raising the temperature, that is, we can get more of these bitters and astringents, and possible objectionable substances out by boiling water than we can by water at 200 degrees Fahrenheit. But we want to check up on it absolutely by the animal experimentation.

Time is Also a Factor

The factor of time is also of very great importance. Using a definite quantity of ground coffee, we have prepared extracts at constant temperature in which time of heating has been varied from two minutes to as high as eight hours. In these studies comparison has been made of the specific gravity, the total soluble solids, the reducing power as shown with copper solutions, and the amount of caffein dissolved have been determined. In these investigations we have tried the following extracts: 5 per cent., 10 per cent., and 20 per cent. That is to say, we have used in each case 5 and 10 or 20 per cent. of the weight of water in ground coffee. The results have shown that two minutes' treatment at the boiling temperature dissolved something over 80 per cent. of the total caffein; nearly as much is taken out almost instantly, while the long-continued treatments yield slightly higher results in soluble solids, reducing power and caffein, the figures show conclusively that the desired constituents are almost instantly extracted.

The experiments which I have just described were carried out at 100 degrees C., and we now propose to repeat this work, using lower temperature in order to determine if approximately the same results may be obtained. One of the outstanding results of the whole series of experiments on the time and temperature has been the pronounced deleterious effect upon flavor and aroma in the case of coffee which has been actually boiled even for as short a time as one minute. This is very marked as evident from the opinions expressed.

Another matter which seems to be of immensely greater importance than has been ordinarily supposed is the effect of metals upon the taste or flavor of beverage coffee. The average consumer of coffee in the home is probably accustomed daily to a beverage coffee prepared in a metallic coffee-pot of some sort, either tin-plate, aluminum, copper, nickel, or silver-plate. Another large group, but probably not a majority, has undoubtedly been accustomed to coffee prepared in agate ware or some of the vitrified utensils, which are in reality much like glass or porcelain. These we call "glass" utensils. We have conducted a large number of experiments with reference to the effect upon the taste and flavor of these metals and the results have been of a somewhat surprising character, in that it is evident when we compare

coffee made in glass or some of the vitrified utensils with that made in exactly the same way in contact with metals, there is a pronounced difference in taste which the discriminating observer can in general pick out.

It is a well-known fact, for example, that the metals—aluminum, tin, tin-plate, copper, nickel and silver—are acted upon more or less by organic substances of acid reaction. They vary in the degree in which they may be acted upon, and we find that the differences which we get here correspond very closely to the differences which we get or which have been observed in such things as fruit juices and other organic substances of that sort.

It is fairly obvious that many of these metallic substances yield pronounced flavors when cooked with an organic solution such as coffee infusion. This is particularly pronounced in the case of certain metals, and seems to be most marked with tin, tin-plate and copper. There has long been a tradition that silver produces a distinctive taste in coffee, although we have not checked this by experimentation.

The practical application of this is to get as far as possible from continued contact with metals. There are limitations which we frankly recognize, but we aim to call attention to the direction in which we believe improvement can be made in the future.

In connection with these experiments, in which groups have been used to check up the results obtained by the single observer in the laboratory, it is interesting to note the much greater sharpness with which the opinions are arrived at when cream and sugar are added to the coffee, as compared with the results in the black coffee. This is undoubtedly due to the fact that the great majority of individuals are accustomed to a coffee containing cream or milk and sugar, and that their taste is therefore more trained to distinguish differences than when coffee containing neither cream or sugar is employed. In both cases, however, the results are in strong accord, and if not entirely convincing to all, will at least prove to be suggestive, I think, of certain possibilities in the improvement of coffee-making throughout the country. We have been able to show in the laboratory that even a short contact of a coffee infusion with metals is accompanied by the formation on the metal of a thin deposit which, we believe, is a chemical combination between some ingredient of the coffee and the metal itself. That these organic-metallic combinations may yield marked flavor is well known to chemists and this result should be of great practical value to the coffee dealer who is anxious to increase the sale of coffee by making the beverage a more generally accepted one.

We don't know at all, of course, whether these organic metallic compounds have any physiological effects, but we have no evidence at the present time to show that they do. That is another line along which we shall probably want to carry some experiments, in order to determine absolutely whether this is the case or not.

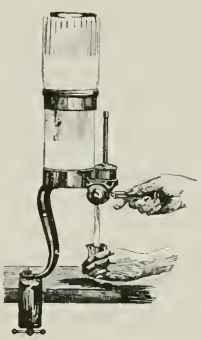
A few infusions which have been prepared either at different temperatures or in contact with different metals show fairly marked differences of appearance or changes upon standing. Any coffee infusion which has had prolonged heating or heating at a high temperature soon becomes cloudy through the formation therein of a colloidal suspension which cannot be filtered out. Moreover, the change in flavor which results is too well known to need comment. A large part of this change in flavor is undoubtedly due to the loss of volatile oils and others which supply the delicious aroma of the well-prepared beverage, but there is some indication that other changes induced by the separation of this finely divided material may also take place. It is an extremely interesting fact that in the beverage coffees which have been prepared at temperatures approximating 90-94 degrees C. (below 200 degrees F.), that is, below the point at which the marked chemical change I have mentioned is observed, the solution remains much clearer upon standing and shows much less change in taste and aroma. This point is also of importance in the preparation of the so-called perfect cup of coffee. The character of the changes which are brought about here still remains to be thoroughly investigated, but preliminary results are so marked in their character that they indicate in a pronounced manner the importance of the whole study which we have undertaken. I do not wish to appear too critical or to give too great weight to some of these matters. It is the way progress will be made, however.

The opinions we have arrived at with reference to the making of good coffee, may therefore be summarized by the statement that the filtration processes yield a clear good coffee if made with fresh materials and with the right conditions of time temperature and utensil. In our experience, the use of those percolation processes in which the ground coffee is constantly subject to repeated treatment with the hot water, or coffee infusion, yield much less desirable results and are, in fact, far from satisfactory. Long continued heating processes or those in which the coffee is actually subjected to boiling are even worse in this respect, as they bring into solution bitter or astringent substances, and drive out of solution the fine aroma which can only be obtained by retaining the evanescent ethers and volatile oils.

There are many factors which need repeated study, but I believe it will be evident from the statements I have made that a good deal of progress has already been secured in the study of our problems of proper coffee-making. From the purely scientific standpoint, there remain many things to be determined and each new departure from the older type of investigation opens up a new field which may be of very great practical, as well theoretical, importance.

AN ECONOMICAL CREAM DISPENSER

The economical and sanity dispensing of cream is a recognized problem in every institution. A manufacturer has recently introduced a new device, simple and compact, that dispenses the cream direct from standard quart bottles. This device accurately measures each portion of cream, is drip-proof and keeps the cream well mixed at all times. The cream is dispensed direct from the bottle just off the ice; it is never touched by hand and is clean and sanitary. Such a device should have a ready sale in the hospital field not only for diet kitchen use but for use in main service rooms as well.



"Life is short, art long, occasion brief, experience fallacious, judgment difficult. It is requisite that the physician exhibit what is essential, and that the patient, attendants and all which surrounds him, concur therein."

—*Aphroisms of Hippocrates.*

AUTOMATIC VENTILATORS FOR THE HOSPITAL

The problem of proper ventilation in hospitals is a subject that has been given close study by hospital authorities. As a result of this study many authorities believe that better results are obtained without mechanical or forced ventilation and recommend the utilization of open windows. The open, unguarded window, however, has serious drawbacks; among them, the inability to control draft and the necessity of constant vigilance to prevent the entry of rain or snow.

Nor has the study of ventilating problems been confined to hospital authorities; it has received the close

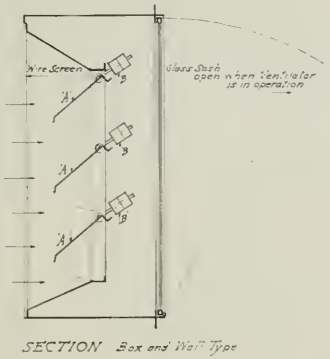

Wire Screen
Glass Sash open when Ventilator is in operation
A
B
SECTION Box and Wall Type
OPERATION
The aluminum louvers A are finely balanced open by the adjustable lead weights B which can be adjusted to suit any degree of wind pressure

Fig. 1

interest and attention of those in charge of health conditions in schools and public buildings of all sorts. In New York City a recent investigation of school ventilation extended over a period of several months and comparison was made of results obtained in mechanically ventilated and window-ventilated schoolrooms with respect to the health of the occupants. The result of this study is briefly summarized as folows:

"The significance of these two sets of results may be expressed in this manner; for every 100 cases of respiratory illness in the cool window-ventilated rooms, there are 152 in cold window-ventilated rooms, and 231 in fan-ventilated rooms."

To overcome the obvious drawbacks to open-window ventilation, there has recently been designed a special automatic ventilator which in the last analysis is nothing more than an open window automatically guarded against drafts or weather.

This protection is secured by extremely sensitive counter balanced louvers which exclude wind, rain or snow, yet insure a free circulation of fresh air at all times, regardless of outside weather conditions. Once installed the automatic ventilators need no attention or upkeep regardless of weather conditions, it is said.

These new automatic ventilators are manufactured in definite units in any shape or size up to 1,600 square inches for installation in windows of any type, transoms, steel sash or the walls of new structures. They are made of solid copper, finished in any color.

The principles of construction of the new automatic ventilator is well shown in the sectional cut (Fig. 1). As will be seen, there are a number of louvers, made of aluminum, each with an individual counter balance. These counter-balanced weights hold the louvers open under normal conditions, but close automatically when the wind pressure is strong enough to cause a draft or to drive in rain or snow.

While automatic ventilation is thus secured, further regulation is possible. The counter weights which control the sensitiveness of the louvers are threaded on an extention of the shaft, bent at right angles and secured in position on the principle of a locknut. When the counterweights are placed near the axis of the shaft, the louvers

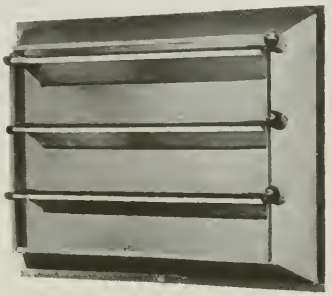


Fig. 2.

will close with the slightest wind pressure. As the counterweights are moved toward the end of the shaft, the resistance to the wind is correspondingly increased. The fact that the louvers are not only made of aluminum, but are mounted in self-aligning dust-proof ballbearings, immersed in oil, insures their action under all conditions.

The single insert standard box type and window type automatic ventilators has an opening 7x9 inches and are suitable for installation in walls, window openings or for general use in building construction. The frame is made of heavy gauge, pure copper, with a heavy copper screen on the outside which prevents insects, dust, etc. from entering.

Fig. 2 shows the inside view of the unit, enabling com-

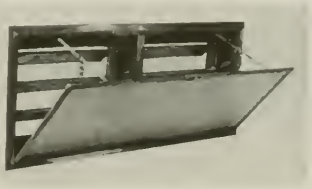


Fig.

parison with the detailed drawing of construction shown in (Fig. 1).

To meet other requirements, the ventilator is also made in the form of multiple inserts, these being fitted with two to four units, giving a ventilating opening of from 126 to 252 square inches.

Fig. 3 shows one of the multiple insert ventilators, containing two units. This illustration also shows the glass door, which is, as a rule, provided on the inside of the ventilating units. This door is hinged at the bottom, flush with the inside wall and is valuable for deflecting the air upwards. This door can be adjusted to any desired angle or completely closed.

One of the common methods of installation of the automatic ventilator is at the top of the window attached to the frame outside of the sash as shown in (Fig. 4), this

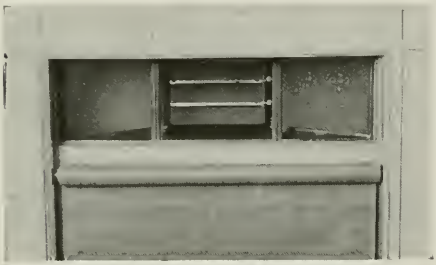
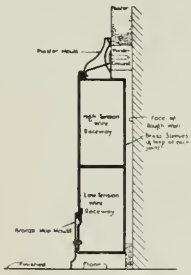


Fig. 4.

being a view of an installation from the inside. In this case a single unit has been employed, the space on either side being filled in with glass panels. One of the valuable features of this form of installation is that it permits the customary use of the window shade. The shade does not at any time obstruct ventilation, nor does the incoming air cause the shade to flap.

A NEW SOLUTION OF WIRING PROBLEMS

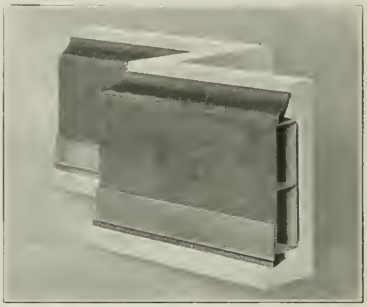
Electrical wiring problems in hospitals have always been serious. No matter how carefully planned a new institution may be, there frequently arise new needs for special outlets, service plugs, special call systems and possible high tension current for x-ray purposes. In the ordinary method of conduit wiring it is an expensive and tedious task to make comprehensive changes in wirings or connections. Likewise in established hospitals where changes are desired or new circuits needed, the superintendent is confronted with the expensive difficult task of conduit wiring through walls, or the unsightly exposure of open wiring contained in conduits.



To meet these wiring needs for both old and new buildings there has recently been designed a special metal base board containing two raceways for electric wiring. This metal base board as will be seen from the illustration takes the place of the ordinary base board and provides readily accessible channels for carrying service wires. By removing several screws the entire face or front of the base is removed exposing the two channels in which can be carried all service wires. As a rule one of the channels or open conduits is designed for high tension and the other for low tension wires.

One of the most valued features of this device is for the installation of special x-ray laboratories or other purposes where high tension current is needed which can not be readily supplied from the existing electric circuits. For such purposes is of great assistance in the remodeling or replanning of existing buildings. Another valuable use of this special base is for the inclusion of a signal system wiring; it enables changes to be made in existing outlets and gives a flexibility to the system that is not possible under ordinary conditions.

This new device offers a sanitary metal base, finished

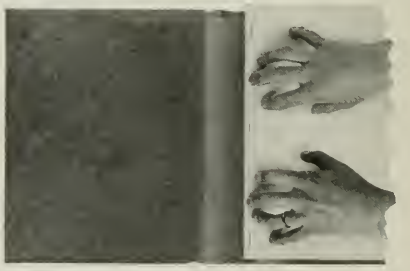


to match any wood, marble or metal, and provided with a natural bronze mop mould. For wiring purposes it provides large concealed metal raceways immediately and easily accessible at any point for inspection or new connections. Any number of outlets can be readily installed and connected at any desired point.

When this new conduit base is employed, it is possible to make as many changes in wiring connections and outlets as may be desired. The photograph shows the finished appearance of this new metal base, while the zinc etching shows the detailed cross section.

CONVENIENT CHART BINDER

The increased importance of case record maintenance has resulted in numerous new devices adding to convenience in handling and filing various record forms. The accompanying illustration shows a new chart binder which



is not only cheap and durable but enables the hospital to combine individual records readily.

The various sheets pertaining to one patient (history, physical, clinical, pathological, laboratory, x-ray, continuation, etc.) are assembled in their proper order and fastened with a small hand stapling machine into a complete unit. The unit is then fastened in the binder by means of a gummed slip, and the whole presents a neat and finished appearance.

One of the great advantages of this system is that upon readmission of patients, the completion of additional

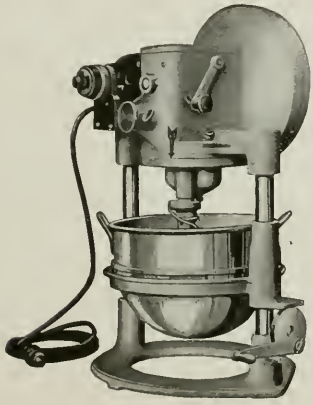
records in the out-patient department, or in follow-up work, additional sheets can likewise be stapled together, attached by a similar gummed binding slip and securely bound within the same covers.

This method of preserving case records was devised by the Presbyterian Hospital of New York and has been found to insure not only the safety and preservation of the records but ready accessibility and ease of reference.

A SMALL SIZED MIXING MACHINE

Many of the smaller hospitals are still using laborious hand methods in kitchen operations simply because most of the mixing machines on the market have been too large and complete for their requirements, while, on the other hand, household size equipment is not suitable for their work. Recognizing this condition one of the established manufacturers of mixing machines has recently introduced a new and practical outfit which meets the requirements of the smaller hospital.

This machine may be electrically operated from any lighting current and is equipped with a 10-qt. bowl, whip and beater. The little machine will perform a complete line of kitchen duties, including the mixing of all doughs,



beating of eggs, batter, etc., mashing potatoes and other vegetables, whipping cream and icings, as well as straining soup, sauces and purees.

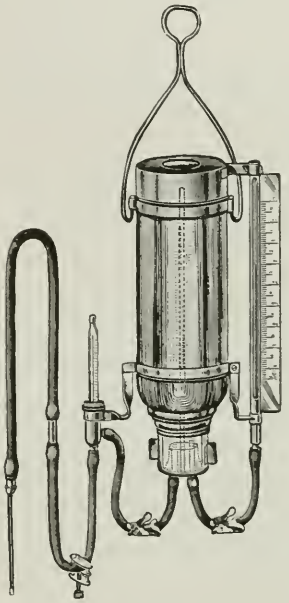
In addition there is an auxiliary drive which can be attached to a meat and food grinder, vegetable slicer, coffee mill and similar equipment that can be obtained at a moderate additional cost.

The construction of the new mixing machine is thoroughly substantial and workmanlike. It is finished in baked white enamel, and so is easy to keep clean. The machine is said to be quiet-running; beaters and bowls can be easily and readily removed. A centralized control is provided so that speed can be changed and the machine started and stopped by the use of one lever.

FOR ADMINISTERING FLUIDS

Recent improvements have been made in a device for the clinical administration of fluids which are apparently most practical. A device of this kind has a wide range of usefulness in institutions, it being applicable for the intravenous administration of fluids, hypodermoclysis, proctoclysis, duodenal and intestinal feeding and therapy, transduodenal lavage, and the administration of irrigating fluids, Dakin's solution, etc.

One of the outstanding features of the equipment is the use of a non-breakable vacuum bottle which contains the fluid and conserves its temperature. The entire outfit is readily sterilizable and is practically indestructible with the exception of the thermometer and a small piece of



glass tubing in the gauge. With this outfit it is possible to register not only the exact temperature of the escaping fluid but, by means of a simple gauge, the exact amount of fluid and the exact rate of flow.

One of the outlet tubes is connected to the glass gauge, indicating at all times the exact amount contained in the vacuum bottle in terms of cubic centimeters and enabling the amount of fluid administered to be determined accurately at all times. Through another outlet tube the fluid is carried to a chamber holding the thermometer bulb. The thermometer registering Fahrenheit indicates at all times the exact temperature of the escaping fluid. Simple cut-off clamps give positive control over the escaping fluid. The flow of the fluid through the needle is further regulated by a special screw clamp. For intestinal feeding and therapy, a drip bulb is inserted in the tubing which, in turn, is connected to a special intestinal tube to which is attached a gold plated capsule-shape bucket.

This device was originally designed by Dr. J. Buckstein of New York.

"The south wind produces thickness of hearing, dimness of sight, heaviness of head, and is, on the whole, oppressive and relaxing; such are the effects in sickness, during the prevalance of such winds. That from the north, brings with it coughs, sore throats, dysury, constipation, shiverings, and pains of the side and breast; these are the symptoms which take place in sickness when this wind holds dominion."—*Aphorisms of Hippocrates.*

Occupational Therapy and Rehabilitation

Conducted by HERBERT J. HALL, M.D., President, American Occupational Therapy Association, Devereux Mansion, Marblehead, Mass., and MRS. CARL HENRY DAVIS, Advisor in Occupational Therapy, 825 Lake Drive, Milwaukee, Wis.
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PLACE OF PHYSICAL REHABILITATION IN THE NEW INDUSTRIAL REHABILITATION WORK

By OSCAR M. SULLIVAN, Director of Reeducation, Minneapolis, Minn.

THE rehabilitation of a disabled person is an activity that has many phases. This is made manifest by the diverse state systems that were created before the Federal act was passed and began exerting its influence in the direction of standardization. Some of the state systems tended to emphasize the physical side, others the educational side and still others the social welfare side It is possible to maintain a good theoretical argument that any one of these phases should be the dominant one. However, at the present time the advantage from the pragmatic standpoint is with the system that gives first place to the educational side, for the reason that the Federal law is an educational one and necessarily leads to the development of this field.

Physical Side Cannot Be Slighted

But even with the educators in charge of the work, it is not likely that the importance of physical rehabilitation will be or can be slighted. It is obvious that if a disabled person can by proper medical and hospital treatment be physically rehabilitated, this should be done rather than to let the handicap remain and undertake a vocational rehabilitation. It is also evident that until everything has been done to put the disabled person in the best physical condition, any steps for vocational rehabilitation may be premature and unwise. It seems, therefore, that while the new state systems of vocational education and placement for disabled persons are necessarily an educational and social welfare activity they must secure the most complete possible interrelation with the work of physical restoration.

In the opinion of not a few who are engaged in the work, a physical examination of every applicant for vocational rehabilitation is essential, first in order to determine the extent of the handicap, and second, in order to determine whether any physical restoration is possible, and if not, whether the applicant is physically able to perform the duties of the occupation chosen for him. Those who wish to keep the rehabilitation work as free from needless routine and formality as possible do not agree that an examination should be made in every case but admit that it is necessary in a large number of cases.

If physical rehabilitation then, is not the direct charge of the state vocational rehabilitation system, whose concern is it? This cannot be answered without making an analysis of the various classes that are covered by rehabilitation. The movement as it is now being conducted in this country cares for some widely divergent groups. The first demand for the work was made on behalf of the persons disabled by injuries within the scope of the workmen's compensation acts. It was soon seen, however, that if it was worth while for the state to establish machinery for reclaiming any group of disabled citizens, it would be sound public policy to use the same machinery for all who were handicapped. As a result the present scope of the system includes victims of all other industrial accidents, of non-industrial accidents and of disease. The great variety of cases must make it very doubtful to anyone whether a single solution of the problem of physical care can be found.

Let us consider the workmen's compensation cases first. Here one is on firmer ground. Surely, with the progress that has been made by this admirable social insurance plan throughout the country, no one would advocate a new system for physical rehabilitation in the compensation cases. It is true that the care given and the standard fixed by many state laws is very inadequate, but the remedy lies in perfecting the system, not in replacing it with a new one. Every state compensation law should provide full medical, surgical and hospital care necessary to cure and relieve from the effects of the injury. It should include proper prosthesis as a part of such care. It should set up such efficient state supervision of the medical care given under the act that the best results would be attained. If there were a reasonably complete medical report filed on each compensation case and reviewed by a competent medical officer of the administrative body, the benefit from the suggestions alone that could be made as to improved treatment should be very great, to say nothing of such steps as clothing the administrative body with power to step in and order a change in treatment in cases where it seemed necessary.

Large Number of Impairments

The statistics that any state can disclose of the large percentage of permanent partial disabilities that are made up of impairments instead of dismemberments would suggest to that layman that here is a place where a big improvement could be made. Illustrating this by the Minnesota statistics which are at hand, I find that out of 1,176 permanent partial compensation cases closed in

the year ending June 30, 1920, 613 were cases of loss of function compared with 563 that were dismemberments. The dismemberments include amputation at any time after the injury, and it is possible that even in this group there are some that can be saved by improved methods.

Difficulty in Making Uniform Plan

In the absence of effective state control much could be done by voluntary action on the part of the insurance companies. It is not meant to be implied that any of these are not now giving a very high grade of medical care, but it is felt that this is a field where the insurance companies might well be at competition to show which can render the best service. At the San Francisco meeting of the International Association of Industrial Accident Boards and Commissions, a representative of the insurance companies expressed the thought that they should have a place in the rehabilitation movement and that this place should be given them by such changes in the laws as would make it possible for them to reduce compensation if they effected rehabilitation. The writer opposed this view, holding that reduction of compensation in such cases would penalize the injured man and would be a deterrent to rehabilitation. He offered as an alternative the suggestion given above, that the insurance companies had their place in rehabilitation because they have so much to do with the physical restoration of the injured man. Their incentive to do well in this field should be that of service and the time should come when an employer would pick an insurance company because of its reputation for giving the best service in rendering the injured man physically fit.

When one turns to the non-compensable disability cases the difficulty of a uniform plan for the entire group continues. This group can be divided into a large number of classes none of whom have any features in common. One of the important classes is made up of the injured railroad employees. Adjustment is usually made with these on the basis not of a workman's compensation law, but of a modified liability law. The question of negligence continues and in many cases no financial relief is received. As a rule, railroad companies cooperate in maintaining benefit fund systems for their employees, and medical and hospital care is a feature of such systems. It is clear again that in dealing with these cases the state rehabilitation system can act in an advisory capacity only. Nor is the problem any simpler in the other classes which are covered by the group under consideration. Some of these classes are farm accident cases, traffic accident cases, tuberculous cases, disease cases of various kinds and congenital cases.

Advisory Relation Is Wiser Plan

While it is possible that a state which would create a system for physical rehabilitation in conjunction with or subsidiary to the vocational rehabilitation system and with the design of serving as a catch-all for such cases for whom no other provision existed, would find that it could accomplish much good, it would also discover that it required very careful management in order to keep it from interfering with the growth of other specialized provisions which have more warrant for existence. There are so many difficulties to be encountered in setting up standards as to where private medicine ends and public medicine begins that it would seem to be the part of caution to approach this aspect of rehabilitation slowly.

On the whole, therefore, it would appear that sound policy dictates an advisory relation to physical rehabilitation upon the part of the vocational rehabilitation system rather than a relation of direct management. It should be the function of the vocational rehabilitation system to understand all the existing provisions for physical care and bring the injured person in touch with the proper agency for treatment or prosthesis at the proper time. In other words it should make itself a center of influence with respect to physical rehabilitation. It should place itself in a position to know what should be done and also as far as possible, bring the right forces into action. Only in exceptional instances will its own direct work be also therapeutic. At times, there will be cases where the disabled person will begin a course of vocational training at some stage of his convalescence and the course will serve at the same time as occupational therapy. In the great majority of cases occurring in civil life, however, the disabled person is likely to postpone his entrance upon a course of training until he is beyond the need of medical treatment and until various factors affecting his future plans, such as compensation, damages, maintenance funds, or the like, are definitely determined.

The relation just outlined for the rehabilitation system will not be found to be a narrow one. It has not been so found in Minnesota. It offers scope for abundant activity, much accomplishment, and the gradual development of policies which will eventually fill the gaps in the provisions that now exist.

"SUNDRY CITIZENS" SEEK HOSPITAL FOR THEIR "DISTEMPER'D"

Before hospital provision was made for their own families, the early colonists in America maintained at public expense places for the care of sick strangers. In Pennsylvania this practice of caring for the stranger sick is evidenced in a petition presented the provincial assembly in 1751 in which "sundry citizens" seek a hospital for their own use:

"The kind Care our Assemblies have heretofore taken for the Relief of sick and distempered Strangers, by providing a Place for their Reception and Accommodation, leave us no Room to doubt their showing an equal tender Concern for the inhabitants. And we hope they will be of Opinion with us, that a small Provincial Hospital, erected and put under proper Regulations in the Care of Persons to be appointed by this House, or otherwise, as they shall think meet, with power to receive and supply the charitable Benefactions of good People towards enlarging and supporting the same, and some other Provisions in a Law for the Purposes above mentioned, will be a good Work, acceptable to God and to all the good People they represent."

As to the indigent sick, the petition declares:

"That the good Laws of this Province have made many compassionate and charitable Provisions for the Relief of the Poor, yet something farther seems wanting in favour of such whose Poverty is made more miserable by the additional Weight of grievous Disease, from which they might easily be relieved."

As to the care of persons "distemper'd in Mind and depriv'd of their rational Faculties," the petition speaks:

"Some of them are going at large, a Terror to their Neighbors, who are daily apprehensive of the Violences they may commit; And others are continually wasting their Substance, to the great injury of themselves and Families, ill-disposed Persons wickedly taking Advantage of their unhappy Condition and drawing them into unreasonable Bargains."

SUGGEST CONSTITUTIONAL CHANGES IN AMERICAN OCCUPATIONAL THERAPY ASSOCIATION

THE House of Delegates and Board of Management of the American Occupational Therapy Association met at the office of the New York Society on February 22 to discuss certain proposed changes in the temporary constitution adopted last October at Baltimore.

It was not expected that there would be a large attendance of the House of Delegates, which is a widely scattered body, so a number of active members of the Association in and about New York were invited that there might be a free expression of opinion to guide the two bodies in their deliberations and actions at some future meeting.

Of the Board of Management there were present: Mrs. Cornelius Sullivan, Mrs. Carl Henry Davis and Dr. H. J. Hall. There were present from New York, Mrs. Eleanor Clarke Slagle, secretary-treasurer; Miss Marion Taber, chairman of the committee on finance; Miss Susan Johnson, chairman of the committee on education; Mrs. Clyde Myres; Miss Meta Rupp, director of the New York Society; from Philadelphia, Miss Florence Fulton; from Boston, Miss Harriet Robeson, director of the Massachusetts Society for Occupational Therapy; from Washington, Miss Marian Morriss, superintendent of Aides in the Public Health Service; from Albany, Dr. Horatio M. Pollock, statistician, New York State Hospital Commission.

Dr. Hall, the chairman, made it clear in the beginning that while the Board of Management was present with power to act for the society, there were not enough members of the House of Delegates present to allow of any proper functioning of that body.

By far the most important matter under discussion was that of certain criticisms in regard to the personnel of the new House of Delegates. According to the constitution adopted at Baltimore last year, the House of Delegates in which rests the responsibility of electing officers and of advising the Board of Managers is made up of members of state societies wherever they may exist in different parts of the country—one member for every twenty-five in the local societies. While the old Board of Management believed that this would mean a fair representation, subsequent developments have shown that several important constituencies of the Association were left out, and could, according to the constitution, have no direct voice in the affairs of the Association. Among these bodies without representation was the very active and important group of O. T. workers in Pennsylvania where no state society exists. It appeared also, that there were large numbers of Aides working under the Veterans' Bureau and other government divisions—young women in active service desiring expression in the American Association—but having no place in the House of Delegates according to the constitution. The opinion has also been expressed that there should be a considerable number of delegates-at-large made up from active members of the Association working in isolated places where no state societies exist. Another suggestion that a Board of Management consisting of only two members with the president might be too small a number to be truly representative of the Association.

The sense of this meeting, without a dissenting voice, was that the House of Delegates should be very considerably enlarged; the recommendation being that appointments should be made not only from the existing state societies but from any duly organized group of O. T. workers. Also the feeling was that there should be representation in the House of Delegates from such groups as those working together under the United States Public Health Service, Veterans' Bureau and the National Soldiers' Homes, and that the representation be in the ratio of one to ten rather than one to twenty-five, since several of the organizations are so small as to allow of no representation on the old basis. Attention was called to the fact that by such an arrangement the Veterans' Bureau Aides would have a disproportionately large number of representatives in the House of Delegates. To offset such a difficulty the suggestion was made that after a representation of six had been allowed any one group, there should be no further representation except in the ratio of one to 100 members. Members of these groups, who were also members of state or other local societies, could of course be counted in one group only. Unless the House of Delegates should become too large for easy functioning, it was suggested that delegates-at-large be appointed in the ratio of one for every three or four regular group delegates.

DISCUSS JOINT MEETING WITH A. H. A.

ALTHOUGH the House of Delegates chose Boston as the next meeting place for the A.O.T.A., there has been some disappointment expressed by the middle western groups because it has now been three years since an annual meeting was held in that section. Travel expense is high and many who would like to attend these meetings cannot take the long journey to the east.

Since the vote for Boston was cast, there has been suggested the possibility of meeting with the American Hospital Association at Atlantic City September 25-29. Atlantic City is a long way from Chicago and Milwaukee, but if we make this fusion we shall be able to share with the larger association the benefits of greatly reduced railroad fares and of a joint meeting place.

There are many other reasons why it would be desirable to accept this offer if all the arrangements can be perfected. O.T. is a definite hospital function. Not only would the hospital executives have a chance to become familiar with our work, but we could with great advantage attend some of their meetings.

The House of Delegates has been asked to reconsider the vote for Boston, and it is hoped that they will agree on Atlantic City as a desirable compromise. Announcement of the result of the second ballot will be made in THE MODERN HOSPITAL *next month.*

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These points were, of course, only suggestions. It remains for the House of Delegates and the Board of Management to decide whether they shall be proposed as amendments to the constitution at the next annual meeting.

Suggest Membership Amendment

The discussion brought forward the information that many members of state societies and other local groups were not members of the A. O. T. A., nor could they be expected to pay the membership fee of two organizations. It was suggested that membership in a local organization might also constitute membership in the A. O. T. A. and that the local organizations might well raise their membership fees slightly and contribute to the support of the American Association. This is a matter which will no doubt be brought up for discussion in the fall meeting. Mrs. Slagle was asked to make a survey of the situation, and to find out how many members of the local organizations are also members of the A. O. T. A., and how many active members of the A. O. T. A. are not members of any local organization.

The next most important subject was that of an office for the secretary-treasurer, a place where the clerical work of the Association could be done, where records could be kept, where all inquiries could be forwarded, and where a central registration office for aides and directors throughout the country could be provided. Although it was difficult to see where the money could be raised for such an office, the general agreement was that without it the A. O. T. A. could not function intelligently or comprehensively. The sense of the meeting was that such an office should be provided. Mrs. Slagle said that a suitable location was available with several other national organizations, a cooperative plan which would reduce the expense to $30 a month for the office itself and possibly $20 for clerk hire. The Board of Managers had already voted to authorize Mrs. Slagle to secure this office, and she was requested to get from all the schools and state societies a full record including a list of available aides and positions open. It was suggested that she might with advantage ask the local societies and schools to make no appointments or placements without notifying her, and that she should keep them informed of any placements made through the central office.

Would Meet with A. H. A.

The annual meeting place for the A. O. T. A. was brought up for discussion. Mrs. Davis from Milwaukee made it clear that the middle-western section, representing a very large and important group, felt that it was not quite fair to have the next meeting in the East as had been voted by the House of Delegates with only a very small margin in favor of Boston. As a compromise and for various other advantages, it was suggested that the A. O. T. A. might meet with the American Hospital Association wherever that large organization might choose to have its annual meetings. Occupational Therapy is distinctly a hospital function and it is understood that the American Hospital Association would be glad to have the meetings held with them. The A. H. A. will have its next meeting at Atlantic City, and while this is a long way from the Middle West, it would be possible through affiliation with the Hospital Association to secure greatly reduced railroad fares and hotel accommodations, so that many, who would be debarred from going to Boston on account of expense, would find it perfectly possible to go to Atlantic City. The meeting voted to suggest to the House of Delegates that they reconsider their decision. Such a reconsideration can, of course, be made by mail ballot within the next few months. Ideas and suggestions on this point from any member of the society will be very gladly received by the president and will be passed on by him to the House of Delegates.

The question of a graduate summer school at Byrdcliffe, N. Y. was considered. Every one agreed that such a school was desirable, but the meeting was distinctly unfavorable to the assumption of any financial or other responsibility on the part of the A. O. T. A. The suggestion was made that the various existing O. T. schools might well conduct summer courses for graduates, thereby reducing travel and other expense for members wishing to take such courses.

Appoints Legislative Committee

Certain matters pertaining to pending legislation in New York state were discussed, very important matters concerning provisions for O. T. work in public institutions, and in regard to the purchase and sale of articles manufactured under the O. T. system. The president was asked to appoint a committee on legislation for the A. O. T. A. Miss Taber, Mrs. Slagle and Miss Robeson were appointed.

Miss Johnson reported that the New York State Society had been at work on the matter of obtaining from physicians and aides definite statements of their clinical successes and failures, so that there might be on record an increasing mass of data concerning the actual progress of the system. She stated that this work was already going on, and the idea was commended by the meeting.

Dr. Hall expressed the feeling that in the future the state and local societies would be growing more and more important and more active in initiative and that unless they had very full representation in the House of Delegates of the A. O. T. A. there would be a tendency to withdrawal of support from that organization. He felt that from now on the future effectiveness of the A. O. T. A. depended upon the influx of power and support from the local organizations. Until recently the A. O. T. A., formerly the National Society, had been the only important directing center but that now the situation was different and that the A. O. T. A. must make itself more sensitive to the needs and requirements of local organizations; that the A. O. T. A., now it was to have a central office, could fulfil a function heretofore impossible; that its usefulness, so far from being impaired by a fuller representation in the House of Delegates, would be greatly increased and developed.

COMMENTS ON THE NEW YORK MEETING

To Dr. Herbert J. Hall:

"Regarding the representation, it seems to me that it would be much wiser to go back to the old plan if the House of Delegates is to be increased and make every member a member of it. I certainly have no objection to increasing the Board of Management, but believe that the society must reconcile itself to the fact that it will be controlled by a minority of the Board, if business is to be transacted at meetings. By all means let us do anything that will promote good feeling."

(Signed),
W. R. Dunton, Jr.
Towson, Md.

To Dr. Herbert J. Hall:

"I thank you for the minutes of the meeting recently held in New York City. After reading the discussion relative to the House of Delegates, I am inclined to think

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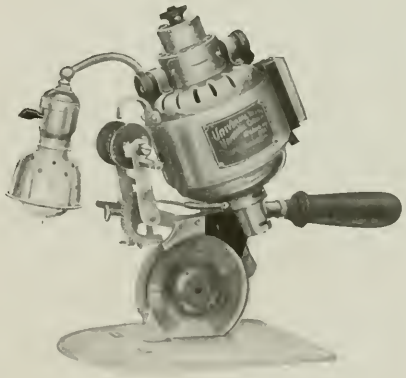

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that little good will be derived from the House of Delegates as a body. In other words, I believe that it was a mistake to establish this intermediate body between the individual members and the National Society. I believe that an executive committee of nine members, three to be chosen each year to act with the officers in the general management of the Association, would function far better than a House of Delegates. I fear that the national organization will lose many of its members if control is continued in an intermediate body and individual members are not given any part in the management of the Association unless they also belong to a state organization.

"I mention these things not to criticise the present constitution, but rather for your consideration when the matter of amending the constitution is taken up."

(Signed),

HORATIO M. POLLOCK, Statistitian,
State Hospital Commission,
Albany, N. Y.

CONDITIONS GOVERNING JOINT MEETING WITH HOSPITAL ASSOCIATION

Relative to the proposed joint meeting of the American Occupational Therapy Association with the American Hospital Association at Atlantic City, N. J., Sept. 25-29, Dr. Herbert J. Hall, president of the A. O. T. A., received the following letter from Dr. A. R. Warner, executive secretary of the A. H. A.:

"This office has now secured the necessary information, all of which is favorable to the joint meeting, and at the recent meeting of our trustees I was authorized to complete arrangements for a meeting of the American Occupational Therapy Association in conjunction with the Atlantic City meeting of the American Hospital Association, provided that the details could be satisfactorily arranged.

"The following details occur to me as fixed:

"1. The American Hospital Association should receive from you a list of the firms manufacturing equipment and supplies connected with the practice of occupational therapy, especially in hospitals. The American Hospital Association will solicit these for commercial exhibits to the end that they shall become a part of the general Exposition of the week. The receipt from the sale of this space will become the property of the American Hospital Association.

"2. The American Hospital Association would furnish without charge to the American Occupational Therapy Association a reasonable amount of space for the exhibit of crafts work, the same being interpreted as a minimum of 800 square feet and such additional amount as it can provide without additional expense to itself. The idea is that these exhibits would be permitted to expand into any space not sold and as the Pier was constructed for exposition purposes all space is good and about equally so. If additional space were required for this purpose, the same would be made available at cost to us, which is 20c per square foot. It is my personal opinion, however, that the purchase of space for this purpose would not be necessary.

"3. We will have three meeting halls on the Pier available for the entire week. The American Hospital Association will use all of these halls for about a day and a half and at other times will be using only the one large hall for general sessions. In so far as there were no conflictions with our meetings—and our skeleton program will soon be determined so that this may be determined exactly—these halls will be available for your use without expense. Knowing that there would be conflict in this matter I took the matter up with the Atlantic City Hotel Men's Association and the following is a paragraph from a letter signed by Mr. A. T. Bell, chairman of the convention committee:

"'The hotels will be glad to furnish without additional expense suitable meeting rooms so far as they are available. I am enclosing a list of heated halls which are all of course equally available unheated and which cover what I think will be ample to take care of the meetings which you have in mind.'

"Of the list of halls submitted fifteen are in hotels and therefore available to you without expense. Several of these are in hotels just across the street from the Pier, so I see no reason why there should be any expense to you whatever for meeting halls.

"4. It will be necessary for your delegates for the purchase of reduced fare tickets to have certificates made out in the name of the American Hospital Association. This has been required in the past notwithstanding that some of the delegates were traveling at least in part to attend the meetings of the American Conference on Hospital Service, the Protestant Hospital Association and the American Association of Hospital Social Workers, which have in the past met with us and will do so again this year. These will be furnished to you at cost to us which last year was $20 a thousand.

"5. It will be necessary for your delegates to register in the hotels as attending the conference of the American Hospital Association, as here again it will not be possible to subdivide hotel certificates. The hotel will then provide the guests so registering with a certificate of attendance on this meeting. This certificate will admit the holder thereof to the Pier without payment of the usual admission fee (50c). The general registration will be conducted by the Atlantic City Convention Bureau to which these hotel certificates should be presented and in return the holders will receive an official badge, which will admit them without charge to the Pier throughout the rest of the week. In addition to this some clerk either from your organization or the Hospital Association, or perhaps others, will finally interview the registrant, collecting dues, etc.

"6. It is likely that the program of the American Hospital Association will be distributed in the form of reprints of the Hospital Supplement of THE MODERN HOSPITAL. Your program could be included in this, making it unnecessary for you to publish additional programs unless you especially desired to do so.

"The above is all based upon our fundamental contract with the convention bureau of Atlantic City. Atlantic City desires conventions, but has no municipally owned facilities to offer. The convention bureau, therefore, makes a cash contribution to conventions based upon the number of people brought to Atlantic City by the convention and this is determined by the hotel certificates presented at the registration. The Million Dollar Pier will give the American Hospital Association a minimum rental of $7,500 to which will be added charges for additional space, extra facilities, etc. The additional attendance which your group will bring to Atlantic City will, therefore, increase the contribution to the American Hospital Association a certain amount, which cannot be accurately determined and the additional expense to the American Hospital Association cannot be accurately determined. We propose, therefore, to assume that the volume of your attendance and the added interest from your exhibits will compensate the American Hospital Association for the general expense incurred.

"I can see it as no detriment to you to have your registration, headquarters, exhibits and part of your meeting on the Pier and the remainder scheduled in the hotels across the street. Some of the smaller group meetings of the Hospital Association will do so.

"It will not be possible for you to name any hotel as your headquarters. You will be supplied with a required number of the folders similar to the enclosed, to send out to your members (together with other literature concerning Atlantic City). The rates of these hotels will be guaranteed by the convention bureau against increase over the printed list and these hotels will be provided during the convention week with the hotel certificates for your convention. All members must make their own choice from the hotels on this list.

"The American Hospital Association can no longer consider a hotel type of convention and in the future all of our meetings will be in buildings especially adapted to conventions and expositions. It is the general opinion, therefore, that our meetings will rapidly assume the type of the congress of meetings and I can therefore assure you that the addition of your group at this time without any obligations on your part as to future decisions will be very acceptable to the American Hospital Association."

RELATION OF SUPERINTENDENT AND TRUSTEE

The board of trustees must have confidence in the competency and executive ability of the hospital superintendent. Its members must deal with him as the medium of transmission to the internal organism; they must go to him as a source of information about the entire running of the institution; and he, in turn, must be honest with them in giving them true and accurate reports. When downtown, as well as at the hospital, trustees must play the game towards their hospital superintendent. There must be no intrigue and double-crossing. Gossip reacting against the institution should be combatted by the trustees from their knowledge of the hospital or referred to the superintendent if it deals with topics on which they are not informed. The politician trustee is apt to be a menace to hospital progress, and his policies lead to the disruption of real service. There should exist between superintendent and board member a mutual confidence, trust and honesty in all dealings.

BEN FRANKLIN, HOSPITAL TRUSTEE, HAD TO ATTEND BOARD MEETING

Hospital boards of trustees in the twentieth century may take a tip from the first board of the Pennsylvania Hospital which in 1754 passed the following rule:

"Resolved to meet hereafter on the First Fifth-day of the week in every month at five in the afternoon, and that each Manager absent at such Meetings should pay two shillings and those not coming in due time should pay one shilling; the Fines to be disposed as the Majority shall direct."

Benjamin Franklin was elected president of the Board of Managers of Pennsylvania Hospital shortly after the adoption of this rule but history does not record that he ever had to pay a fine.

"Without theory, practice must be a blind doing of what somebody else—tradition, authority or accident—has directed."—Moore.

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DISPENSARIES AND OUT-PATIENT DEPARTMENTS

Conducted by MICHAEL M. DAVIS, JR., Ph.D., Executive Secretary Committee on Dispensary Development, United Hospital Fund of New York, and Chief, Service Bureau on Dispensaries and Community Relations of Hospitals, American Hospital Association, 15 W. 43rd Street, New York
and by ALEC N. THOMSON, M.D., Director of Medical Activities, American Social Hygiene Association 370 Seventh Avenue, New York

MEDICAL DISPENSARIES

By GEORGE DOCK, M.D., Professor of Medicine, Washington University, St. Louis.

MEDICAL dispensaries are making history at so rapid a rate that it is difficult to recognize the true proportions and tendencies. I shall try to show you some of their most important developments and set forth some of their problems, medical as well as social. You should all be familiar with the fundamental chapter on the out-patient department by Dr. Louis H. Burlingham in the work on *Hospital Management*, edited by Charlotte A. Aikens, Saunders, 1911, and with the articles and notes in the monthly periodical, THE MODERN HOSPITAL, Chicago.

In the indispensable work of Davis and Warner, *Dispensaries; Their Management and Development*, you will find that the medical dispensary is supposed to have taken its origin in London after the great fire of 1665. So many people were impoverished that the physicians of London voted that all members of the organized profession should give their services without charge. I have no doubt that the real origin might be traced farther back, for out-patient services probably originated at many times in the past just as they do now from the in-patient departments of hospitals. Patients who are discharged are often advised to come back for further observation. This always builds up a service that has to be organized, and is sometimes cared for by hospital physicians, sometimes by a separate staff. Somewhat later medical dispensaries were organized by physicians for various other reasons. Some did this to gain personal experience more rapidly; others for teaching medical students. In the early days of the profession in North America, young men worked and studied with practicing physicians. The latter, sometimes as individuals, sometimes in groups, founded dispensaries in which their apprentices, as they were called, gained additional experience. As medical schools were formed and obtained students, they naturally adopted and developed the same system.

Another object in opening dispensaries is financial, either for the profit of the promoters or the assistance of people not quite in the usual dispensary class. This is becoming conspicuous at the present time and deserves more discussion than I can now give.

Finally there is a cause for the formation of out-patient departments related to improvement of public health.

We have then four different causes for the formation of medical dispensaries; charity; needs of medical teaching; public health requirements; and financial gain. Two or more of these motives may be combined in the formation of a medical dispensary.

A natural development of the out-patient department is the subdivision of services according to the specialization of medical study and practice. Even at an early time there were special kinds of dispensaries, particularly those for patients with skin diseases and eye diseases. It was soon recognized that sick persons are likely to have many associated diseases or that the whole body needs consideration, and in recent times the tendency has been to develop all sorts of services in the same building or group of buildings in order better to treat patients. The subdivisions may be more or less refined according to the size of the service and the size of the staff. Among the most important recent additions are services for diabetics, for patients with heart disease, tuberculosis, diseases of the ductless glands, joint diseases, and even such specialties as conditions due to protein poisons, including asthma, hay fever and hives. In surgery we have the natural subdivisions of orthopedics, accident, brain and nervous system, gynecology, plastic surgery, and surgery of teeth and mouth; while other services attend to such things as the saving-baby movement, prenatal care of expectant mothers, control of fecundity, mental hygiene, venereal diseases and many departments for treatment, especially such things as x-rays, radium, mechano-therapy, hydrotherapy and gymnastics. Playgrounds and public bathing places could be closely associated with out-patient departments with advantages to all concerned.

The addition of public health problems to dispensaries has caused a certain amount of alarm in the minds of some people, they fear the encroachment of the state in medical practice. This seems to depend on a wrong idea. What we need is greater efficiency in looking after all problems of disease. Our public health service is less complete than that of many other advanced countries. It does not seem to make much difference what we call the thing, the fact is clear that the public should take a greater interest in the formation and maintenance of out-patient departments than it now does. Some of those who object to the participation by the state, i.e., by the public in general, think that money should always be obtained from rich people who should see that the necessary hands, not to say brains, are provided. This touches a very important point at the present time. It is probable that most money formerly given to charitable medical purposes did not come from so-called rich people, but rather from a large number of people who, while not rich, were in fairly comfortable circumstances. Since the great rise of prices following the war and the enormous taxation to cover the cost of past and future wars, this so-called

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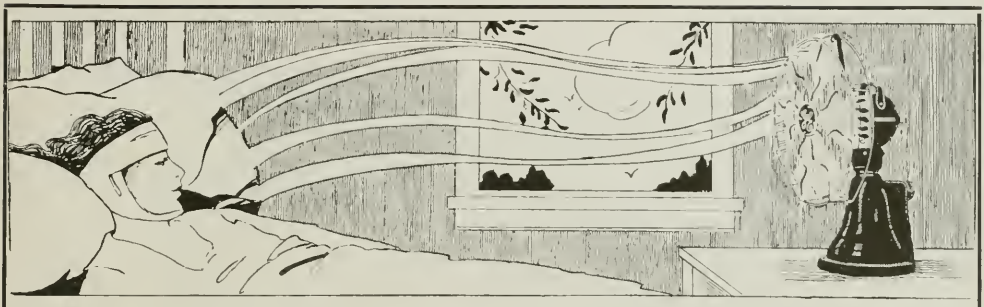

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middle class has practically no money to give for purposes of philanthropy. The rich are beginning to feel the drain on their resources and many of them are taking the ground that all such matters should be carried out by the whole population. In other words, even without any thought of socializing medicine, we may have to face the alternative of dropping a large part of medical work altogether or having it cared for at the public expense, which could best be done through taxation. There is a detail in regard to this that may be worth considering. Some people who gave to so-called charity in the past thought they were giving a practical answer to the question: "Am I my brother's keeper?" This is a very narrow way of looking at the matter, for in a very real sense our brother is our keeper. Abel may not ask our protection; may not ask us not to injure him, but he threatens us with tuberculosis, gonorrhea and syphilis, with malaria, with whooping cough and diphtheria. Therefore not charity but self-protection should give a very strong motive for organized medical work.

In regard to patients whose diseases come from vice we have the new idea of preventive medicine, even if we cannot apply the principles of Jesus—"neither do I condemn thee; go and sin no more." Alcoholism and venereal diseases are social diseases. They cannot be left to the good will or the carelessness of the patient because others are likely to be exposed to violence, to neglect or to infection. They must be combated by the combined efforts of physicians, social workers and efficient public health administration, with a thoroughness we are fairly able to formulate but that we rarely perform.

Competition with Physicians

There has always been more or less complaint about dispensaries taking away patients who should go to doctors. In this connection of course the basic idea is that the patients in question should pay the doctors. If physicians wish to treat the poor free that would seem to be an individual matter and easy to arrange. A young doctor, for example, who wishes to gain experience in this way has only to speak to ministers with poor congregations, social service agencies or overworked doctors in order to get all the material he can use. On the other hand, it seems to be a principle that sick people do not set up a fund on which the medical profession can draw. The sick man may not think of asking a doctor for help. Of course it cannot be considered proper in general for a dispensary to take patients who could just as well be looked after by practicing physicians, but this is a complicated question, and only to be settled in each case on its merits. In many cases the public health feature enters. Everything that is necessary to prevent the spread of disease seems to require the intervention of some other agency than the patient and the physician in his private capacity. Of course the latter may be for the time being a health officer, but that is accidental.

Cases Referred for Diagnosis

A legitimate function of out-patient departments is the examination and diagnostic study of obscure cases. Such patients must be referred from time to time by physicians who are perfectly competent to carry on the usual treatment but may not be able to perform the necessary diagnostic operations. In such cases the out-patient department should work in cooperation with the physician. This sort of work should be more and more cultivated. The patient may need to be seen at his home; the dispensary attendants cannot do this as well as a neighboring physician, and so there should be cordial relations between out-patient physicians and practitioners, in which the social service worker or local nurse would have important functions.

Ethical problems of various kinds constantly come up in the practice of medicine whether in private practice or in out-patient departments. The basis of medical ethics is the Golden Rule, but certain details might be discussed with advantage. It has long been a tradition of the medical profession that knowledge acquired in the practice of medicine shall not be divulged. This has been carried so far that doctors have been put on the same basis as priests in the confessional by courts of law. In other words, they have not been obliged to divulge things told them by a patient. This, however, is changing owing to a number of modifications in the knowledge of disease. Some of the points are obvious. Doctors and others who work with sick people should not discuss their knowledge of findings except to those who have an imperative right to that knowledge. No one should state to outsiders that a patient has a definite disease or condition, even if the matter is perfectly harmless and simple. Often such statements would do no harm, for example, if we say that a given person has influenza or pneumonia, but the habit of talking about such matters is distinctly dangerous.

Legal Requirements Necessary

There are nevertheless, certain legal requirements that must be obeyed. One may not say to an acquaintance that A, B, or C has smallpox, syphilis or meningitis, but in most localities one must send this information to certain officials. This does not really break the rule of professional secrecy, because the records are private and the officials are under obligations to maintain secrecy. Only those who have a right to the knowledge can inspect the records. Many people take an entirely wrong view of this rule and object, for example, to being reported as having tuberculosis and in that way hinder the treatment and public health care of tuberculosis patients.

An allied subject is the matter of telling the truth to patients. In general only truthful statements should be given to patients. In nearly all cases where the patient is of reasoning age and reasonable mentality, the actual conditions should be explained as clearly as possible, but the important question of Pilate is exemplified every day in medical practice; viz., What is truth? It may seem truthful to tell a patient that he has consumption, but on the other hand, the patient's idea of consumption may be entirely different from that of the person who gives the information. So with cancer and almost any other disease. In order to be really truthful one must find out the patient's knowledge of such words as are used and then give the most accurate idea possible. Much harm is done by premature statements that are supposed to be truthful but are not. So for example, a doctor may tell the patient, or the family, one day that the disease is influenza, another day typhoid, another day pneumonia and another day tuberculosis. He is perfectly honest each time and may pride himself on his honesty with the patient, but absolute honesty requires each time that he should say he does not know what is the matter, that in such cases nobody can know at a certain time; that certain possibilities are evidently present and in the meantime he is doing everything necessary for the welfare of the patient. This also should include the welfare of the public, so that if one thinks a patient has a communicable disease, but is not sure, absolute truth requires that he admit his ignorance and at the same time call in someone who may know better, and especially in such a case, a health officer.

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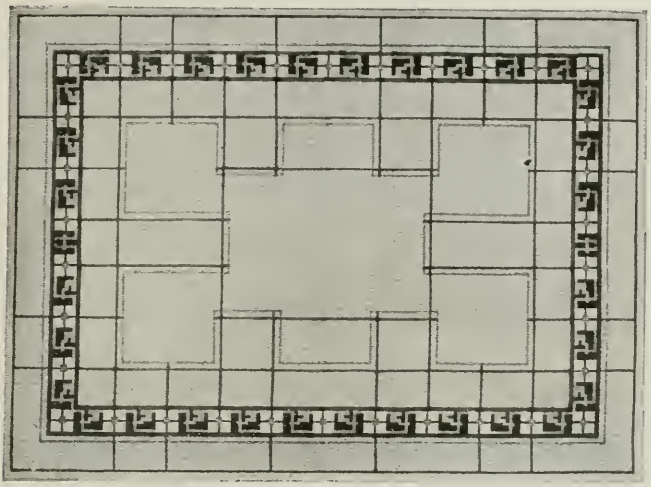
FOR EVERY FLOOR EVERYWHERE



KIMLARK FEATURES

Kimlark Rugs are:

Sanitary—
Can be washed with soap and water

Waterproof—
Not affected by moisture

Odorless—
Having no odor whether wet or dry

Fireproof—
Tests prove it impossible to ignite them

Noiseless—
and soft to walk on. No slivers or harshness

Durable—
Give long wear under hardest usage

WRITE FOR PARTICULARS

World's New Wonder Rugs

At Unheard of Prices For Fine Floor Coverings

The new, sanitary, beautiful Kimlark Rugs are the most modern and economical floor coverings for hospitals. They are woven by a secret process which produces rugs unequaled for wearing quality, softness and utility.

Kimlark Rugs are three-ply thickness, so closely woven that dirt cannot sift through. They are easily washed, fireproof, fadeless, odorless, noiseless and comfortable.

Beautiful, rich designs in brilliant colors on plain and variegated grounds on one side with the reverse side finished plain. Two rugs in one. This means double wear at single cost.

Kimlark Rugs are suitable for every floor covering purpose. Special designs and sizes can be furnished, if desired.

The beauty, long wear, and low price of Kimlark Rugs places within reach of every hospital a long-needed perfect floor covering at moderate cost.

Write for color card and prices.

Manufactured only by
NATIONAL FIBER TEXTILE COMPANY
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KIMLARK RUGS

The Label on the Back Identifies the Genuine

MEETINGS, CONVENTIONS AND CONFERENCES

AMERICAN HOSPITAL ASSOCIATION'S EXPOSITION COMMITTEES AT WORK

HOSPITAL workers who gather in Atlantic City Sept. 25-29 at the sessions of the American Hospital Association convention will see an Exposition of greater educational appeal than has been put on at any previous session, according to plans now in progress.

Inspection of each division of exhibits by committees already named will take place and reports on their findings will be given by committee chairmen before the convention. Committee members will study equipment and materials in their respective divisions and will be prepared to give information and advice to all delegates.

Work has already been begun by the committees, their first step being an exhaustive study of the market in their particular field. No firm will be invited to participate in the Exposition unless it is included in the list submitted by one or more of these committees.

Chairman of the various committees appointed by the president are: Construction, equipment and maintenance, Dr. S. S. Goldwater, director of Mount Sinai Hospital, New York; general furnishings and supplies, Dr. Harold W. Hersey, superintendent of New Haven Hospital, New Haven, Conn.; clinical and scientific equipment and supplies, Dr. A. B. Denison, assistant director of Lakeside Hospital, Cleveland; foods and equipment for food service, Dr. C. W. Munger, superintendent of Blodgett Memorial Hospital, Grand Rapids, Mich.; laundry equipment and supplies, Dr. W. P. Morrill, superintendent of Shreveport Charity Hospital, Shreveport, La.

Reports of these committee chairmen when they are submitted to the convention will present something tangible and definite for superintendents to place before their trustees, it is thought. Their reports will tell the story of the most modern and best materials and equipment obtainable next autumn.

The exhibits will be classed for the convenience of the convention and for the purposes of committee investigation and report into the following general divisions with their appropriate subdivisions.

(1) Building—Construction, equipment and maintenance.
  (a) Materials and specialties.
  (b) Floorings.
  (c) Paints and finishings.
  (d) Power and heating equipment.
  (e) Lighting systems and fixtures.
  (f) Plumbing and waste disposal systems and equipment.
  (g) Signal systems.
  (h) Ventilating systems and devices.
  (i) Elevators, dumbwaiters and ash hoists.
  (j) Ambulances.
(2) General furnishings and supplies.
  (a) Furniture—wood or general.
  (b) Floor coverings—carpets, rugs and linoleum.
  (c) Curtains, draperies, awnings and screens.
  (d) Linens—table and bed blankets and spreads.
  (e) Beds and mattresses.
  (f) Uniforms and other garments.
  (g) Office equipment, forms, printing and administrative supplies.
  (h) Cleaning equipment and supplies.
  (i) Miscellaneous supplies.
(3) Clinical and scientific equipment and supplies.
  (a) Furniture—steel and special.
  (b) Surgical and scientific instruments.
  (c) Medical, surgical and nursing supplies.
  (d) Sterilizing equipment.
  (e) Therapeutic equipment.
  (f) Laboratory and x-ray equipment and supplies.
  (g) Drugs and pharmaceuticals.
(4) Foods and equipment for food service.
  (a) Food stuffs.
  (b) Equipment for refrigeration and storage.
  (c) Equipment used in food preparation.
  (d) Equipment for transportation and serving of cooked foods.
  (e) Dish washing equipment.
(5) Laundry equipment and supplies.
  (a) Water softening and purification.
  (b) Linen marking.
  (c) Sterilization of infected mattresses and linen.
  (d) Washing, drying and ironing equipment.
  (e) Laundry supplies.

The reports of these committees will be made by the chairmen before a general session not later than the second day of the convention.

HOPE TO FORM TRI-STATE ASSOCIATION

The Wisconsin Hospital Association will hold its convention at LaCrosse on May 31 and June 1, it is announced. Invitation has been extended by the board of directors to all hospital workers in Iowa and Minnesota. Out of this meeting it is hoped that some plan can be devised whereby the three states may meet jointly once a year. If the plan is carried out as conceived by Wisconsin hospital workers, the three states will unite in a single organization and apply to the American Hospital Association for recognition as a geographical section.

Provision has been made at LaCrosse for the entertainment of the convention and the committee is preparing an interesting program. The Rev. H. L. Fritschel of Milwaukee is president of the Wisconsin association and H. K. Thurston of Madison is executive secretary.

The tentative program follows:

Morning Session (May 31. 10 a. m.)

Address of welcome by the Mayor.

President's report.

Reports of executive secretary and treasurer.

Reports of standing committees.

Address by Dr. A. R. Warner, executive secretary of the American Hospital Association, Chicago.

Afternoon Session (2 p. m.)

"The Standardization of Hospitals of 50 to 100 Beds,"

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Comparative condition of Softwood and Maple floors at the end of 18 years' service

A Contrast in Cleanliness

Why MAPLE outwears STONE

Every shoe in the thousands that strike a stone sill, grinds off its toll of fine particles in an unchanging friction. But Maple builds up its own resistance to wear, because each passing foot increases the polish on this hard-fibred, tight-grained wood, making it smoother and smoother. That is why Maple surpasses all other woods and all other materials for flooring.

MFMA The letters **MFMA** on Maple, Beech or Birch flooring signify that the flooring is standardized and guaranteed by the Maple Flooring Manufacturers Association, whose members must attain and maintain the highest standards of manufacture and adhere to manufacturing rules which economically conserve every particle of this remarkable wood. This trademark is for your protection. Look for it on the flooring you use.

THIS illustration is chosen to show you the extremes of flooring woods. It shows Maple alongside a softwood floor—both subject to the same wear. But this difference between Maple and all other woods exists to a degree down through the entire list. Maple—tough-fibred, close of grain—makes a smooth, tight, long-wearing floor that provides no lodging place for dirt and disease germs.

For this reason, Maple is chosen as the standard floor for hospitals. In corridors, entrances, and wards, where it is used bare, it can be scrubbed to spotless cleanliness. In private rooms it can be varnished or waxed to give a subdued, quiet beauty in distinct harmony with the hospital atmosphere.

In MFMA Maple flooring you get Northern Maple—the slow-growth, climate-hardened wood from Michigan and Wisconsin, the source of the world's finest Maple for floors. Maple and its kindred woods, Beech and Birch, are made and guaranteed according to the strict manufacturing rules and standards of the Maple Flooring Manufacturers Association.

Your architect will advise you in the selection of these three widely used woods for floors. Local retail lumber dealers can show you the grades of MFMA flooring suited to hospital use.

MAPLE FLOORING MANUFACTURERS ASSOCIATION
1065 Stock Exchange Building, *Chicago*

Floor *with* Maple

Dr. Frederick W. Slobe, American College of Surgeons, Chicago.

"The community Hospital," Dr. F. E. Sampson, Creston, Iowa.

"The Laboratory in its Relation to the Hospital," by a representative of the Mayo Clinic, Rochester, Minn.

Discussion lead by Dr. Thalheimer, Milwaukee, Wis.

Business session.

In the evening there will be a meeting of citizens at the Congregational Church, where an address by Prof. Kickhaefer of the University of Wisconsin will be given.

Morning Session (June 1, 9:30 a. m.)

"The Laws of Wisconsin Relating to the Nurses' Registration, Miss Eldrige, directress of nurses, State of Wisconsin.

Round table conducted by Mr. Asa S. Bacon, superintendent of Presbyterian Hospital, Chicago.

The final session will consist of papers and discussion.

Business session, election of officers, etc.

of the following topics:

"The Organization of the Medical Staff."

"The Relation of the Hospital Administration to the Medical Staff."

"The Relation of the Superintendent of the Hospital and the Superintendent of Nurses."

OHIO ASSOCIATION MEMBERS WILL GATHER AT DAYTON

The Ohio Hospital Association will hold its eighth annual meeting at the Miami Hotel in Dayton on May 9-11. An elaborate program is being arranged for the three-day convention, consisting of addresses, symposiums and round table discussions.

Dr. C. D. Selby, state chairman of the committee on hospitals of the American Medical Association, will deliver one of the principal addresses on "The Hospital and the Medical Profession." Dr. Willard C. Rappleye, chairman of the committee on the training of hospital executives of the Rockefeller Foundation, has a place on the program, along with Dr. A. R. Warner, executive secretary of the American Hospital Association.

A noon symposium on building and equipment promises to be a profitable part of the program. The order of events for the convention is as follows:

Tuesday, May 9

10:00 a.m. Registration.
Meeting of Committees.
Inspection of commercial exhibits.

2:00 p.m. Address of welcome—Hon. Frank B. Hale, Mayor, City of Dayton.
President's address—Dr. A. C. Bachmeyer, superintendent, Cincinnati General Hospital.

2:45 "The Program of the American Hospital Association"—Dr. A. R. Warner, executive secretary, American Hospital Association.

3:00 Round table—Dr. A. C. Bachmeyer, chairman.

3:00-4:00 Dietary.

4:00-5:00 Housekeeping and laundry.
Note: Members are requested to submit questions for discussion.
Inspection of commercial exhibits.

8:00 "The Problem of the Crippled Child in Ohio"—Edgar F. Allen, president, Ohio Society for Crippled Children, Elyria, Ohio.

8:30 "The Hospital and the Medical Profession"—Dr. C. D. Selby, chairman, Committee on Hospitals, American Medical Association, State of Ohio.
Discussion.

Wednesday, May 10

Inspection of commercial exhibits.

9:30:-12:00 Noon symposium on building and equipment.
Discussion of the Ohio Building Code—Charles Owsley, Architect, Youngstown; The Noise Problem in Hospitals—Ray Parsons, Acoustical Engineer, Cleveland; Efficient Lights and Lighting—Walter Sturrock, Lighting Engineer, Cleveland; Paints and Color Effects—Edgar W. Fasig, Dayton.
General discussion.
Inspection of commercial exhibits.

12:45 p.m. Luncheon at Miami Valley Hospital—Dr. E. R. Crew, superintendent.

2:30 Round table on "Administration"—Conducted by M. R. Pratt, Aultman Hospital, Canton, Ohio.
Question box—Note: Visitors are urged to submit questions for discussion.
Inspection of commercial exhibits.

6:30 Dinner—Address by a prominent speaker.

Thursday, May 11

Inspection of commercial exhibits.

9:30 a.m. "The Training of Hospital Executives"—Dr. Willard C. Rappleye, Rockefeller Foundation, New York City.

10:00 "The Problems of Hospitals from the Point of View of:
1. The State Department of Health"—Dr. R. G. Leland, chief, Bureau of Hygiene.
2. The Board of State Charities"—Harry Howett, director of child care, department of Public Welfare.
3. The Nurse Examining Board"—Miss Augusta M. Condit, chief examiner.
4. The Industrial Commission"—Dr. T. R. Fletcher, chief medical examiner, Industrial Commission of Ohio.

Reports of Committees.
Constitution and Rules.
Auditing.
Membership.
Nominating.
Election of Officers.
Unfinished Business.
Adjournment.

Owing to a typographical error in the manuscript on "Management of a Venereal Disease Clinic" in the April issue, Dr. Alec N. Thomson was made the authority for the statement that in cities of less than 200,000 such clinics are managed with difficulty. The figure should have been 20,000.

"Many of you recall the day when you first realized that you really could do some school task or the like distinctly well. The stimulus of it made you work, perhaps as you never had before. From continued success through many years our attitude of confidence is developed. On this largely morale depends, and in many cases a single marked success goes far to produce it. The stimulus of success is an essential condition of normal development and mental health."—Selected.

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ROYAL Baking Powder

Absolutely Pure

Adds only wholesome qualities to the food and makes it appetizing.

CONTAINS NO ALUM

Your Occupational Therapy Supplies

For *65* years the name "Prang" has stood for *"Quality"* in Hand Work and Art Supplies. These *"Prang Products"* are being used by hundreds of the leading public, private and U. S. Government Hospitals for Occupational Therapy. They have *Educational* as well as *Therapeutic* value.

"Enamelac"

The Air-Drying Decorative Art Enamel

Ideal for all work in Decorative Design. It works on wooden boxes, toys, furniture, tin cans, glass bottles. Also on "Permodello" and "Ivorene" Jewelry. "Oilette Cloth," etc. Made in 22 colors. Price, per can, 30c. Outfit of 6 cans, shellac, turpentine and 3 brushes in hinged box, postpaid, $3.00.

"Permodello"

The Permanent Modeling Clay—works like magic

This new Modeling Clay looks like ordinary clay but when exposed to the air it sets like concrete and becomes hard. It is used for making beads, jewelry, and hundreds of useful and beautiful articles. When hard it takes decoration with "Enamelac." Price, per pound can, 60c.

Long-Leaf Pine Needles

Native Material for Basketry and all Weaving. Needles from 12 to 18 inches long, beautiful in color, easy to weave. Price, per pound, 60c.

"Bateeko Dyes"

The Perfect Dye in Powder Form

While originated for "Batik" Work, they are ideal for all Art Dyeing. Price, per packet, 25c. Beautiful book on "Batik," by Lewis, postpaid, $1.60.

"Dekko Board"

For All Decorative and Construction Work

This is a new Composition Board for making Toys, Table Mats, Boxes, Waste Baskets and other Novelties. Takes decoration with "Enamelac." Ready cut circles in 4 sizes for Table Mats. This new and inexpensive Board will solve many of your hand-work and construction problems. Send for sizes and prices.

"Stixit" Paste

The Stickiest Paste in Town. A Better "Library Paste."

"Stixit" was the first improvement in "Library Paste" in 25 years. 4-in. tube, 10c. 6-in. tube, 15c. ½-pt. tin can, 30c. 1-pt. tin can, 55c. 1-qt. tin can, 90c. 1-gal. tin can, $2.75.

"Modelit" Modeling Clay

The Wax Modeling Clay Never Hardens

¼ pound brick	$0.15
1 pound brick	.50
5 pound brick	2.25
Clay Flour, per 5-lb. bag	.40

Raffia and Reed

Natural Raffia, per pound	$0.30
Colored Raffia, per pound	1.00
Reed, Nos. 1, 2, 3, per pound	1.45
Nos. 4, 5, 6, per pound	1.35

"Ivorene" Jewelry

"Ivorene" is the newest material for work in Decorative Design. It looks like ivory, but comes in sheet form. It can be cut with a sharp knife or a coping saw. It takes "Enamelac" decoration and makes Pendants, paper cutters, book marks, tags, and many other practical articles. Per sheet 4 x 5 inches, 30 cents; 5 x 10 inches, 75 cents. Also cut larger sizes. Illustrated circular free.

"Ivorene Novelties"

We supply a line of eight "Ivorene Novelties" ready for decoration with "Enamelac." Your patients will delight in making designs for, and decorating these novelties that make artistic and useful gifts. Square mirror, $2.00 per doz.; Pen Wiper, $1.60 per doz.; Memo. Book, $2.00 per doz.; Circular Mirror, (2½ in. diam.), $4.00 per doz.; Mirror (3¼ in. diam.), $5.50 per doz.; Vanity Case, $5.50 per doz.; Tape Measure, $3.00 per doz.; Signature Blotter, $2.00 per doz. Send for illustrated circular.

A copy of our new 28-page illustrated "Prang Bulletin" will be sent free to hospitals and O. T. workers

THE PRANG CO., 1922 Calumet Ave., Chicago. 118 E. 25th St., New York City

Hints to Hospital Superintendents

A SATISFACTORY SYSTEM OF HANDLING PATIENTS' ACCOUNTS

A system of handling patients' accounts which is proving eminently satisfactory has been worked out at Presbyterian Hospital, Chicago, by the superintendent, Asa S. Bacon, and has been in successful operation since last autumn. The basis of the system is the billing of patients on the day of the week of entry, and its advantages lie in its reduction in effort and in its simplicity; the latter point does away with the necessity of employing trained and expert bookkeepers.

Cards bearing the day of the week, date of entry, name of patient and room number (Monday, May 1, John Jones, 311) are filed in a small case, classified as to days of the week.

Monday's section contains the cards of all patients who entered the house on that day of the week. Bills are sent out daily, Monday's patients being billed on Tuesday, etc. Three days later the cards are checked over to see if the bill has been paid. If the account has not been paid the patient is sent a check-up bill.

A color scheme makes the patient's status apparent at a glance. Colored metal clips attached to the upper edge of each card tell the story. For example:

Yellow clip—billed today.

Red clip—paid in advance.

Blue clip—in arrears.

Green clip—bill uncollected and account turned over to efficiency man.

White clip—free or part-pay case, social service department.

From the ledger sheet which is brought up to date each evening when the charges from the various departments come in, the patients are billed. The day's routine in the office consists in billing, checking and rechecking the cards, after the following schedule, no work being done on Sunday:

Sun.	Bill S.&S. Mon.	Bill M. Tues.	Bill T. Wed.	Bill W. Thurs.	Bill Th. Fri.	Bill F. Sat.
	Check Thurs.	Check Fri.	Check S.&S.	Check Mon.	Check Tues.	Check Wed.
	Recheck Tues.	Recheck Wed.	Recheck Thurs.	Recheck Fri.	Recheck S.&S.	Recheck Mon.

The day the ward patient comes in he is billed, for his account is payable weekly in advance. Private patients are not billed thus but on the third day of their stay if their first week's account has not been settled are sent the following printed notice:

> **The Rules of the Hospital**
>
> require payment of bills from all patients one week in advance. Should the patient stay less than a week, a proportionate amount for the unexpired term will be refunded. Your attention is respectfully called to this rule and you are requested to send payment of the accompanying bill to the cashier's office.
>
> ASA S. BACON, Superintendent.

If this does not bring results a second more suggestively worded slip is sent.

> **The Rules of the Hospital**
>
> require prompt payment of all bills weekly. As the hospital is not operated for profit, but depends upon its daily revenue to carry on its service, it is necessary that strict compliance of this rule be observed. Unless payments are promptly made, much embarrassment to the hospital inevitably results.
>
> With this explanation, your attention is respectfully called to the amount of your bill, $———— due———————— and its payment requested.
>
> ASA S. BACON, Superintendent.

They are given a week to pay and on the day following the expiration of their week are billed.

In a large hospital the cost of cards is such a system is a considerable factor and to reduce this as much as possible the patient's day of entry, name, etc., are placed at the upper edge of the card. When his account is closed, the card is turned upside down and used again for another patient. The reverse side of the card is then used with both upper and lower edges. This enables one card to serve four successive patients.

NEW HARDWARE IN THE HOSPITAL

"Re-hardwaring" has made an unbelievable improvement in some hospitals. Like the working parts in any kind of machinery, hardware will wear out in time; old locks can be picked by a buttonhook; knobs get shabby and out of date. Hardware designs become old fashioned and out of keeping with newly decorated or remodeled rooms and buildings. New designs can be readily obtained which will entirely cover the markings of oil patterns and the hospital carpenter or house man with the aid of an awl and screw driver can easily do the trick. New hardware on windows, cupboards and doors will do much toward improving the appearance of buildings.

Adv. page 54

An appetizer, a garnish, an entree in one

Purity Rolled Oats not only satisfies the scientific requirement of most diets,—but it also has another usefulness.

It coaxes appetite, with its eye-appeal. It stimulates appetite,—with its sweet nut-like flavor. It satisfies appetite, with its nourishing oat-meats.

Purity flakes are the only flakes which cook up so beautifully whole,—because the bran coatings and the starches which they hold, have been so perfectly processed in the manufacturing.

Free Hospital Package

Write on your hospital letterhead to the Purity Oats Company, Keokuk, Iowa, for the free hospital package. Try this totally different rolled oats.

PURITY OATS COMPANY
Branch American Hominy Co.
KEOKUK & DAVENPORT
IOWA

Purity Rolled Oats

Totally Different

Famed for Flavor

QUERIES AND ANSWERS

FLOOR DRAINS IN OPERATING ROOMS

To the Editor of THE MODERN HOSPITAL:

I have been requested to write to you for arguments for and against drains in the floor of operating rooms. We have a new hospital with floor drains. The floor is always scrubbed with water containing disinfectant. Twice monthly the drain is removed and thoroughly cleansed and then flushed with two per cent Lysol solution. Several of our doctors have expressed themselves that they consider this drain a source of grave danger. The hospital board would appreciate it greatly if we might know what some men of attainments in the profession thing about this matter.—SUPERINTENDENT.

On the subject of floor drains several superintendents and hospital architects have been consulted and their opinion is that these drains are not desirable, not so much because they are a source of danger, a contention which it would be exceedingly difficult to sustain, but because it is difficult to keep them clean and because they are really not necessary for the efficient care of operating room floors.

The tendency during the past decade among hospital architects who know their business thoroughly is to eliminate plumbing fixtures from the operating room altogether. Even with close and most conscientious supervision on the part of the hospital superintendent it is difficult to have drains in the operating room kept absolutely clean; theoretically it is all right to plan to have the drains cleaned out with two per cent Lysol solution twice a month, but you have no assurance that this will be done unless you give it personal supervision. The larger the institution and the more complex the superintendent's duties the less likely he is to see that this is done.

There is also this to be said about the drains, although it is a minor matter, unless water is run into them frequently there is danger that the water trap will dry up and thus permit the passage of sewer gases into the operating room. When this does happen it can of course be readily corrected by pouring some water into the drain. The better plan, on the whole, seems to be to omit drains from operating room floors.

CENTRAL OR INDIVIDUAL INCINERATORS?

To the Editor of THE MODERN HOSPITAL:

Which is preferable in the disposal of waste, a central plant or small individual incinerators?

SUPERINTENDENT OF HOSPITAL.

Experience in many hospitals has shown that a central incinerator is more serviceable than a number of small incinerators placed about in every service room. A central incinerating plant may be connected with the main heating system so it can be utilized for the burning of garbage. By having a central plant the man in charge is able to sort out from the waste each year many dollars' worth of surgical instruments, silverware and other articles which get down to the garbage room through the carelessness of employees.

QUIET ZONES AROUND THE HOSPITAL

To the Editor of THE MODERN HOSPITAL:

How may quiet zones be obtained around large city hospitals?

MEMBER OF BOARD OF DIRECTORS.

Most cities have ordinances providing quiet zones about hospitals, but very frequently these are of little avail because the city provides no officer for their enforcement. By frequent requests hospital authorities can usually get an officer detailed to that district for periods of time frequent enough to keep the quiet zone regulations in the public mind. The laying of wood pavement near hospitals is a big step in maintaining quiet.

STANDARDIZATION OF BANDAGES

To the Editor of THE MODERN HOSPITAL:

Would it be practical to install a central gauze room for several hospitals in a community to standardize bandages?

SUPERINTENDENT OF HOSPITAL.

There is no question but what there is economy in the standardization of bandages. As to whether it would pay to have a central gauze room or not that would depend largely upon local conditions. In the case of a small hospital which lacks the machinery, space and employees to make bandages and is consequently compelled to buy them, it would be economical if they were standardized.

WASHING SODA NOT INJURIOUS

To the Editor of THE MODERN HOSPITAL:

In our maternity hospital of sixty beds, soda was used at one time in the laundry for the babies' clothes, but as many of the babies had skin infections the use of soda was stopped and since then the infections have disappeared. Can you make any suggestions on this question? A SUPERINTENDENT.

The use of washing soda in your laundry, if you rinse the goods properly, will not cause injury to the skin of either infants or adults. If you are using hard water, the goods may be harsh and therefore scratch the skin of the infants. Hard water causes lime soap to form and this causes the goods to be harsh.

VACATIONS FOR MEMBERS OF STAFF

To the Editor of THE MODERN HOSPITAL:

What length of holidays should be given the following:

(a) Official nurses on staff?

(b) Graduate or head nurses in charge of wards or doing floor duty?

(c) Nurses in training? HEAD NURSE.

There will be differences of opinion, no doubt, but a fair allowance seems:

(a) One month. (b) One month. (c) Three weeks.

Adv. page 56

Patients like it

One simple dessert that patients never seem to tire of is Minute Tapioca. They like it because—"it's the kind of food we have at home."

There are a score of desserts you can make with Minute Tapioca. By varying them you can serve it often and yet escape any seeming monotony. You can use it in many diets—general, light, soft, and some specials.

The high nutritive value and ease of assimilation of Minute Tapioca are unquestioned. It is one of the standard items on the diet list in leading hospitals.

Minute Tapioca

It Requires No Soaking

Save time in your diet kitchen by using Minute Tapioca. It requires no soaking. It is always ready for use, and can be cooked thoroughly in fifteen minutes.

Our new five-pound carton is designed for hospital use. The 5-lb. cartons come 5 to a case—4 cases equalling 100 lbs. net.

Ask your wholesale grocer for this new size package of Minute Tapioca. Should you have any difficulty in getting it, let us know.

MINUTE TAPIOCA COMPANY, 135 Jefferson St., Orange, Mass.
Makers of Minute Tapioca, Minute Gelatine, and Star Brand Pearl Tapioca

LETTERS TO THE EDITOR

ADEQUACY OF SMALL LABORATORY EQUIPMENT QUESTIONED

To the Editor of THE MODERN HOSPITAL:

I feel that the article of Dr. G. F. Strong on the subject of "Laboratory Service in Hospitals of Less Than One Hundred Beds*" must not remain unanswered.

With all intentions of doing good, Dr. Strong, I fear has done much harm to hospital laboratories, for his paper will be read by hospital administrators (who always look for minimum expenditures and so-called "economic efficiency") as an authoritative statement of what small hospital laboratories can do or should do for their patients. Dr. Strong's line of endeavor is along hospital administration and not laboratory work. The old apothegm of "sticking to one's last" holds here very admirably.

The patients in a small hospital are just as sick as those in large hospitals. Their ailments are as obscure and as baffling in the country as in the city. Disease knows no aristocracy and is not necessarily urban. It is essential that their condition be studied for the purpose of arriving at a correct diagnosis, no matter where they lie. The so called "laboratory" described by Dr. Strong is as dangerous as rotten fire hose or inadequate fire escapes. The sense of "security is mortal's chiefest enemy."

I think it must be once for all understood that hospital economics is best served where the patient's health is most rapidly restored. Surely arriving at an early correct diagnosis is essential in the proper treatment of patients, and I think medical men will unanimously agree that the laboratory helps greatly toward this end. In order to forego laboratory examination because of its expense, it is not only unethical, but (from the community point of view) it is highly uneconomic. We might just as well (in order to save expense and increase income) put two patients in one bed, as they used to do half a century ago and do away with expensive sterilizers, rubber gloves, sterile gowns, etc., for the saving in expense that these factors would entail.

A hospital laboratory is a source of expense and should not be made a source of income to the hospital. It is as much a source of expense as the kitchens and laundry are, and it is just as essential. If a patient is charged for his stay in a hospital, this charge should include the laboratory expenditure, and in calculating the charge, the cost of running the laboratory should be taken into account. I think it must be once for all understood that the hospital laboratory is a necessity, not a luxury; and the better and the more adequate the arrangements are for the proper conduct of this department, the better will the hospital function as a place where the sick are cured and not as a hotel where the stranger may find lodging for the night or for the month.

A hospital of fifty beds or more must support a well equipped laboratory. The patient should be charged—or the hospital should add to its budget—three to five dollars per week per patient for the proper running of the laboratory. The average stay of a patient in a hospital is about two weeks and the additional expense of six to ten dollars to or per each patient will not add a great burden to the individual and will bring its return in the therapeutic results that will be obtained. Hospitals make their charges according to cost of maintenance and they must invariably consider as part of their maintenance the cost of the laboratory department.

I often wonder at the conscience of a man who speaks about "efficiency and patients" with the same callousness as the man who speaks of "efficiency and pigs." It appears from the article that I have cited above that an incubator should not be installed in small hospitals where a microscope should be, because, whereas a microscope will be used for every patient, an incubator will be used for only one in ten patients. For this very good reason, blood cultures should not be done at this efficiently run hospital. Diphtheria cultures may not be examined. Anyone that worries about the tenth patient is referred to the bookkeeper's accounts which show a comfortable balance on the right side.

If a patient is admitted in an unconscious state to such an "efficient-essential" laboratory as Dr. Strong describes, it is not seemingly necessary to find out what the cause of this stupor is so that proper remedial measures may be adopted. Besides, this is rarely the case and the hospital takes care only of the usual, conventionally-sick patient. We can only cluck our tongue and say we are sorry, and assure the patient's wife or sister that we are doing all that can be done, whereas, in reality, we do not know what to do. We have made no provision for detecting a poison. We do not know if the coma is uremic or diabetic, etc., for we have made no arrangements for doing a blood chemistry. If the urine will not tell the whole story, so much the worse for the urine. It is too expensive to buy a colorimeter for fifty dollars, and our "technician" knows only how to make a blood count and a urine examination.

I might also say that the list of equipment presented by Dr. Strong presents one item that is extravagant and is really not needed in this laboratory. That is item No. 21 "One gross test-tubes, 8x1, for urines." So far as I know to examine urine in such test tubes is a task for the chemist in the land of Brobdignag where Gulliver was considered of a size on par with a canary bird. The test tubes are so large that there would be a great waste of reagents. If, however, the tubes are merely meant as col-

*MODERN HOSPITAL: 1921, xvii, p. 487.

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lecting tubes for urine, this surely is inefficient. The tubes are round-bottomed and have a tendency to fall, crack and spill. Ordinary glass bottles of three-ounce capacity with wide mouths are much cheaper, will stand unaided and will not crack and spill so easily. One Bunsen (not Buntzen) burner is enough and will save about two dollars of the hospital equipment.

I also want to condemn Dr. Strong for recommending certain tests which are obsolete. We never examine any more for the Boas-Oppler bacilli, and we now do the fractional gastric analysis instead of the old Ewald method, etc.

Who was it that said: "God save me from my friends; I shall take care of my enemies"?

MAX KAHN, M.D., Ph. D.,
Director of Laboratories, Beth Israel Hospital, New York.

SURGICAL INSTRUMENTS AGAIN

To the Editor of THE MODERN HOSPITAL:

In the March issue of THE MODERN HOSPITAL the writer was very much interested in an article upon "Surgical Instruments of Today," by Dr. Thorek, as well as an article in defense of surgical instruments by some dealer unknown to the writer.

In this connection let me say that I appreciate fully the doctor's attitude from the experiences he described. On the other hand, I consider the article by the dealer, as an excellent defense, for in Dr. Thorek's article he unquestionably fails to give expression to the fact brought out by the dealer that this fault, in many instances, lies with the hospitals and their insistence upon the purchase of cheap merchandise.

It is an old story that one obtains just exactly what he pays for and nothing more, and the longer experience the writer has in business, as well as personal purchases, the more he believes this to be true. I would like to relate right here a concrete example of what came to our firm's attention only a couple weeks ago. One of our representatives on the road sent in a card of a new competitor in the field, stating that he was having difficulty in a certain territory owing to the fact that this man was selling hemostatic forceps for $7.00 to $8.00 a dozen depending upon the pattern, and scissors at a similarly ridiculous figure. The man in question, not being a member of our association, I immediately knew that it was not a standard house in the line handling standard goods and likewise the name and address indicated this as his card stated he was manufacturers' commission agent and he gave the address of his home, Newark, N. J.

I made it a point to delve into this particular incident to the bottom and found that the gentleman in question had previously been in the shirtwaist business and thinking that the surgical instrument line was a pretty good game to get into he started in this business. I traced the source of his supply and had an acknowledgment from the people who sold him the goods that the hemostatic forceps in question were sold to him at $2.00 a dozen and they frankly admitted their pleasure in getting rid of this lot of "Japanese junk," as they termed it, yet he took it out and sold it to some of our best customers among hospitals.

While he was making from three to four hundred per cent profit on every dozen he sold, at the same time he was so far under us in price as to make us look ridiculous in asking $18.00 to $21.00 for similar instruments.

It is really for the surgeon to insist that the superintendent buy surgical instruments from certain reputable firms of known responsibility who will stand behind their goods and not always purchase supplies of this nature on a price basis. As we were recently told by certain superintendents they appreciated the quality of our goods, the service we gave them and liked to deal with us but our prices were too high and the party that gave them the best price was the one that was going to get the business.

This is a very narrow attitude to assume on what Dr. Thorek terms so vital and important a thing as the instrument in the hand of the surgeon with the responsibility of a patient's life at stake, particularly in view of the fact that if the average hospital simply stopped to dissect what they actually expended in a year for surgical instruments it would find that item to be the most trivial part of the entire budget, exceeded by their butter and egg bill and almost everything else that they bought.

When we speak of surgical instruments we mean just what the name implies, but many superintendents have a habit of classifying these under surgical supplies and the like and running them in with other purchases for gauze, cotton, hospital furniture, etc., so that where they show a yearly expenditure on their balance sheet of possibly $20,000, out of that $20,000 there might not be $500 that was actually expended for surgical instruments, and if they paid twice the figure at present day prices it would still maintain as being one of the smallest items of expense in operation of an institution. HARRY W. LENTZ.

MOUNT SINAI DEDICATES BUILDINGS

Dedication of the three new buildings at Mount Sinai Hospital, New York, took place on April 9 with Mayor Hylan, Murray Hulbert, Adolph Lewisohn, Henry Morgenthau, John D. Rockefeller, Jr., and William Fellowes Morgan as guests of honor.

A new private pavilion with accommodations for 131 patients, a children's pavilion with a capacity of 120 beds and an auditorium building that will seat 400 were formally presented for acceptance by George Blumenthal, president of the hospital. Myron S. Falk, chairman of the building committee, made the presentation.

Speakers at the exercises were: Leo Arnstein, presiding officer; Bird S. Coler, commissioner of public welfare of New York; and Arthur Lehman, president of the Federation for the Support of Jewish Philanthropic Societies.

With the dedication of these three buildings, which cost $3,000,000, Mount Sinai Hospital has completed the major part of its building program announced in 1913. Since that year seven buildings have been added by the hospital to the ten erected in 1901 to 1904.

"The newspapers of the United States are the friends of hospitals," said Ralph Welles Keeler, director of publicity of the hospital and homes of the Methodist Episcopal Church. "Take your local newspaper man into your confidence. Entertain members of the newspaper staff occasionally, just to get acquainted with them, and in order that they may come to know you. Make them feel that you wish to help them get such news as you have. Cooperate in giving them guidance in securing other news. Encourage feature writers to visit your institution. Interest them in special phases of the work of the institution. Furnish photographs when asked for them. Play up your staff in the paper. Help reporters and editors to get data along the line of your institution from other sources. Never be too busy to see a representative of the press. Be on the lookout for possible items of news that will bring them to you."

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THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment and Administration of Hospitals, Sanatoriums and Allied Institutions, and to Their Medical, Surgical and Nursing Services

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HOSPITALS OF HAWAII

By Our Hawaiian Correspondent

IF Hawaiian hospitals have been compelled to give precedence in song and story to moonlit beaches, smoldering volcanoes or dusky hula dancers, it is not that they are unworthy of mention. Indeed, even if they be unsung, the hospitals of Hawaii have played and are destined to play a large and larger part in the history of these picturesque islands where, in spite of an equable climate disease is prevalent.

The first hospital on the islands was founded at Honolulu through the efforts of Queen Emma Kaleleonalani, the wife of Kamehameha IV, in 1859. It, the Queen's Hospital founded at a time when the city had but 12,000 inhabitants, now is the leading institution of its kind in the territory, catering to the physical needs of a city of 83,000.

Other hospitals were established later until now Honolulu, with its heterogeneous population, can claim seven such institutions,—five civilian, two military. On other parts of the island and on other islands of the group, hospitals have been founded, many of them equipped surprisingly well and giving efficient service. Some of these are described in this article.

In this attractive building, the Kauikelani Children's Hospital, are housed the sick young of the many nations and races which make the Islands their home. Kauikelani is located in the Nuuanu Valley, a mile from Honolulu.

The Queen's Hospital* in Honolulu on the island of Oahu is situated in the heart of the city and in the center of a twelve acre plot beautifully parked with palms and rare trees from all over the world. The site was conveyed to the hospital corporation by the family of King Kalakana in 1860.

*An article written by the architect of the New Queen's Hospital and describing it fully will be published in an early issue.

In spite of the lapse of time and a climate supposedly destructive, the building is in a remarkable state of preservation but is so inadequate and inconvenient for the present needs that a recent financial campaign was inaugurated to raise $250,000 for new additions. This amount was readily oversubscribed by citizens of the community. A handsome new building is now being constructed which will accommodate fifty-two additional patients.

A typical Hawaiian plantation hospital, the property of the County of Maui, near Hana.

The old plant accommodates 155 patients and has 35 private rooms. The hospital has three wards for white men each accommodating ten. One is given to the care of marine patients; four wards of ten beds each used for the care of native and oriental men; four wards for women, one of them a maternity ward and nursery. All these are frequently overcrowded so that beds have to be placed on the lanais or porches.

In buildings detached there are two isolation wards where infectious and contagious diseases are cared for. The departments of the hospital consist of the following: medical, surgical, obstetrical, x-ray laboratory and a training school for nurses.

For surgical work there are two large fully equipped operating rooms with modern appliances and a smaller room for minor operations. The surgical work as done by the staff is said to be of a very high character. A complete x-ray plant operated by a paid technician is under the direction of the staff as is also a cystoscopic room. The laboratory is in charge of a paid technician and drug room is in charge of a paid pharmacist.

Medical attendance is supplied by a resident physician, three interns, a hospital staff consisting of two physicians and two surgeons, eye, ear and throat specialist and a pathologist. The hospital of itself does no charity work owing to financial deficits in operation but the city and county of Honolulu supply all the needs of the indigent sick.

The training school for nursing is governed by the trustees and is under the direct supervision of the hospital superintendent and superintendent of nurses. During the three years of training pupils work under the instruction of graduate registered nurses, most of whom come from the mainland. Practical work is given in surgery, in the medical and obstetrical wards, and in the laboratory and drug room. A graduate registered nurse is instructor of nurses in all class work, and lectures are given by the staff physicians and surgeons. Instruction is also provided for the nurses at the University of Hawaii. Candidates for the school must be 18 years of age and have had at least two years of high school work. The nurses reside in the nurses home in a separate building. Yearly ex-

Partially hidden by the peculiar vegetation of the tropics is the main entrance to the Queen's Hospital in Honolulu. Gay awnings shade the broad lanais to protect patients from a too ardent sun.

aminations are held and the standing of the pupils based on the results, on the character of their general work and their conduct during the year. Certificates of graduation are given at the successful termination of three full years.

The instruction given to interns is purely individual as the staff and residents are in intimate communication on all cases.

The Puunene Hospital at Puunene is an industrial hospital of the better type. Constructed around an open court, each room and ward in the building has two sides open to the sunlight.

The Kapiolani Maternity Hospital located in Honolulu is a private institution operated by a board of trustees consisting of prominent women of the community interested in the better care of pregnant women and in infant welfare. This hospital is not operated for financial profit. Wards are almost entirely devoted to the care of Hawaiian women who pay only for the actual expense involved in running the ward. A physician is appointed by the board of trustees who attends all ward cases free. If however, the patient is absolutely indigent, she is taken care in the same manner as those who pay the nominal fee. The capacity of the hospital is nine private rooms, a general ward of eleven bed capacity and a fully equipped nursery. There is an average of twenty confinements per month.

In conjunction with the hospital there is a training school of obstetrics consisting of a two-year course. This turns out fully competent young women as obstetrical nurses. As the demands on this hospital have been in excess of accommodations during the past six months there is at present a project on foot to build a new $50,000 hospital for obstetrical and gynecological cases.

Hawaii's most modern civilian hospital is a Japanese institution in Honolulu. It was completed in 1919 and has quarters for 69 ward patients and 51 private patients. It has a fully equipped operating room, laboratory and x-ray plant.

The white physician, however competent, is barred from the Japanese hospital in spite of the fact that the community is American. White patients are welcomed provided they are attended by a Japanese doctor. The only logical reason for the hospital's attitude toward the white physician is that none of them speaks the Japanese language and it may be felt that the institution could not be efficiently run due to misunderstandings which might arise from faulty communications.

The board of medical examiners of the territory of Hawaii insists that the examination for

Oriental beauty is not lacking among the nurses at Puunene Hospital, as a glance at this photograph of the operating staff will show.

license to practice medicine and surgery in the territory shall be given in English and has maintained that attitude for the past four years although threatened on several occasions with law suits by foreign applicants who have failed to meet the requirements.

Prominent Japanese of Honolulu operate the hospital and it is partially supported by citizens of that race who contribute a small sum every month. It administers mainly to the needs of the Japanese population. No charity work is done by the institution.

Children's Hospital

Beautifully located in the Nuuanu valley one mile from the city of Honolulu is the Kauikelani Children's Hospital, a modern institution exclusively devoted to the treatment of children's diseases. The hospital was donated to the city in 1909 by the late Mrs. Albert Wilcox of the Island of Kauai to be used largely for the poor children of the city, whatever their nationality. Eight acres of grounds are artistically laid out in lawns and gardens.

During the past year 1701 children have been treated at Kauikelani, more than 1000 of these being absolutely dependent upon charity. The surgeon and physician of the institution are appointed by the board of trustees and donate their services for one year.

Leahi Home

Leahi Home, also in Honolulu, is a typical sanatorium, duplicates of which may be seen all over the United States. It is partially supported by the government and partially by private subscription. Leahi Home ranks high among hospitals of the islands, has an excellent physician in charge and turns out a high percentage of cures. The buildings are of the cottage type. A well equipped laboratory and x-ray department are parts of the institution.

A men's ward at Puunene Hospital.

This rambling bungalow houses the nurses of Puunene Hospital.

In Honolulu also are two government hospitals, the United States Army Hospital at Fort Shafter, a most efficiently run institution, and the Kalihi Receiving Station, a leper hospital, considered to be one of the best institutions of its kind in the world.

Outside of Honolulu, most of the Hawaiian hospitals, worthy of mention are on large plantations or connected with great industries. Such are the Puuenene Hospital, operated by the Hawaiian Commercial & Sugar Company, and the Kahului Railroad Company, the Pioneer Mill Company Hospital.

Plantation Hospitals

As representative of the plantation hospitals is the Pioneer Mill Company Hospital, operated on a sugar plantation at Lahaina on the island of Maui. It has a capacity of 47 beds and serves more than a dozen nationalities, chief of which are Japanese, Hawaiians, Portuguese, Filipinos, and Chinese. Hospital reports for a six-month period show considerably over 600 or 700 cases given treatment within the hospital walls. Many accident cases show in the dispensary reports. The company allows for the free admission to the hospital of all local school children suffering from diseased tonsils or adenoids. A semi-yearly report of the institution reveals the fact that 6,983 out-patients were treated during that period.

Industrial Hospitals

The Puunene Hospital located in the city of that name is strictly an industrial hospital and it admits only employes of the Hawaiian Commercial & Sugar Company and the Kahului Railroad Company and their families. At present the majority of cases are surgical,—accidents,

operative cases and cases of infection. Four or five years ago before the installation of modern filtration on the island most of the cases were medical, typhoid fever leading all other diseases.

The number of admissions at Puunene runs from 575 to 775 a year, and the daily average is around 50 and include patients of many nationalities. The hospital has an out-patient service, which includes considerable minor surgical work. It totals from 25,000 to 30,000 treatments a year.

The hospital is most attractively situated and is built around an open court with every room and ward open on both sides admitting the abundant sunlight which the islands afford almost every day in the year.

The county of Maui has a plantation hospital situated near Hana. It has a capacity of 20 beds and is gaining in facilities from year to year. A government physician and nurse compose the entire staff.

Kula Sanitarium

Kula Sanitarium at Kula, the island of Maui, faces a panorama of concentrated beauty. All the buildings of this interesting institution front the west where across the verdant valley of the Maui stretches the chain of West Maui mountains flanked on either side by broad expanses of the Pacific. From eastern windows patients look out on the upper slopes of Haleakala ascending to an altitude of 10,000 feet.

Here where the air is as balmy as nature can provide, where flocks graze on ample pastures, where habitations are remote, 200 patients fill the sanitarium, founded ten years or more ago by a group of private philanthropists. This spot, which beauty makes healthful to the spirit, is also exceptionally beneficial to bodies with pulmonary and tubercular disorders.

Tents housed the first patients at Kula Sanitarium but canvas roofs have gradually given way to lumber until cottages and wards have a capacity of 200 patients. The resident physician has a comfortable and attractive dwelling, the nurses, a commodious cottage, and patients occupy six wards and seven cottages. There are an operating building with its laboratory, and administration building, a medical and dressing building, a spacious social hall and kitchen, laundry, electric light, and ice plants, all modern in equipment and construction.

Fully 95 per cent of the patients are tuberculous. Except for emergency work in the district the cases are entirely so. Still a larger per cent, ninety-eight, are charity patients. Territorial and county appropriations and private subscriptions maintain the sanitarium.

Among physical conditions which do much toward making Kula almost ideal for a sanitarium are its temperature (45 to 75 degrees, Fahrenheit in winter and 55 to 89 degrees in summer); its low humidity (15 to 20 inches annually); its almost perfect surface drainage; its lack of flies and mosquitoes; its daily sunshine; and its modern sanitary equipment such as open plumbing, cremation of waste, septic tanks for sewage, and similar improvements.

All buildings are "four-square" in the form of wards, one-story high, and of wood and concrete. They are enclosed in glass which opens outward from below so as to conduct the sun toward the interior and leaving the building, as it were, but roof and floor. Lockers, lavatories and bathrooms are in the center of the buildings, each provided with light and ventilation from above. Hot and cold water, electric lights, and telephone are in each cottage and ward.

From two cows, obtained when difficulty was encountered in getting outside supplies, the sanitarium's barnyard inhabitants have grown to include sheep, pigs, turkeys, chickens, cattle and pigeons. Enough arable land is cultivated to assist materially in the upkeep of the stock and some 280 acres of the tract is excellent pasturage.

Treatment at the institution consists of the usual regime of rest in bed, ample and nutritious food, sunshine and fresh air, prophylactic, medicinal, surgical, and finally the judicious administration of tuberculin. Incipient cases at the sanitarium have made remarkable recoveries and many cases have been arrested.

VETERANS' BUREAU HOSPITALS APPROVED

President Harding on May 16 approved the U. S. Veterans' Bureau's plans for the construction of new hospitals at the following places: one each at Northampton, Mass., Livermore, Cal., and Camp Lewis, Wash.; two in New York state; one at Gulfport, Miss.; and one in the tenth Veterans' Bureau district which includes Montana, the Dakotas and Minnesota. This latter building must be constructed on government land or land acquired by gift.

Plans and specifications are being drawn for twelve hospitals which are to be built under the Langley Act authorization of $17,000,000. The program affords facilities for 5,000 tuberculous and mental patients. Bids on the construction of these hospitals, which will be completed within a year, will be called for within sixty days, and preference will be given former service men in the employment resulting from the construction.

The Federal Board of Hospitalization is understood to favor building a hospital in southern Indiana, one at the Great Lakes Naval Training Station and one in northern Texas. The locations of these four institutions will be decided upon shortly.

President Harding has also approved the purchase of the Methodist Hospital at Memphis, Tenn., it is announced.

MEDICAL TEACHING IN NON-UNIVERSITY HOSPITALS*

By LEWELLYS F. BARKER, M. D., Baltimore.

THOUGH the conflict between tradition and change has been more or less in evidence at all times, men and institutions during the first quarter of the twentieth century have been engulfed in a veritable whirlpool of alteration. The world of today is seething with fresh experiments and new impressions. To become in harmony with the spirit of the hour, men vie with one another in loosening the ties of inherited prejudices and predilections. No one dares to give expression to conservative opinions, for fear of being looked upon as a "mossback"; everyone desires to be a "forward looker" and a "change maker." Obviously there is danger that what should be permanent may become transitory under herd-instinct compulsion, that old values may be underestimated or that our best traditions may be ruthlessly sacrificed by the ultra-radicalism that is manifest in our distractingly changeful life. None-the-less it behooves every man and every institution agitated by the present swirl to make as careful a survey as possible of aims and methods, to base comprehensive plans for the future upon the analyses made, and to arrange for the conversion of these plans into accomplishment.

University Hospitals

In the United States, there are a few university hospitals and a host of non-university hospitals. To understand the differences between a university and a non-university hospital it should be recalled that, in this country, medical schools and hospitals developed mainly as private corporations independent of universities and that it is only recently that proprietary medical schools have disappeared and have been replaced by medical departments of universities. As a part of this reform, it became necessary for the medical faculties of universities to obtain full control of hospitals in which the main clinical branches of medicine might be taught to their students.

The medical wards and laboratories of a university teaching hospital are to the professor of medicine more or less what the physiological laboratory is to the professor of physiology, namely, a workshop of which he has sole charge. In the wards of a university hospital, the professor is unrestricted in his freedom to make use of medical assistants, medical students, nurses, attendants and technical equipment in the prosecution of his work, provided always that the patients are assured both of expert skill in diagnosis and therapy and of a friendly and sympathetic environment. For, of course, it is necessary to distinguish clearly between the rights and needs of human "clinical material" and those of the inanimate apparatus, or the lower animate bodies of non-clinical experimental institutes. In the study of disease, experiment is justifiable; indeed, it is absolutely necessary. But, in making experiments, clinical investigators must remember that the sick man is "neither a test tube, nor a guinea pig"; he is a fellow human-being, to be treated as the investigator would be willing to be treated were he, himself, in the patient's circumstances.

In the university hospital, which obviously must be a general hospital equipped for work in medicine, surgery, obstetrics and, to some extent at least, also in the various medical and surgical specialties, educational purposes are dominating. The faculty controls, plans and manages; medical students in their clinical years are an important part of the working force of the hospital, making under close supervision many of the physical examinations and laboratory tests that are necessary for diagnosis, helping to keep accurate records of the cases, and, in some instances, executing certain of the therapeutic measures prescribed by their responsible superiors. The primary function of the departments of such a university hospital is therefore to serve as the grouped workshops of the clinical divisions of the medical faculty, a place where teachers and students come unhampered into direct contact with the objects of study (sick people), where knowledge of diagnosis, treatment and prevention is both advanced and diffused, while at the same time the patients that enter the hospital are adequately cared for.

Non-University Hospitals

All hospitals other than the institutions just defined as "university hospitals" may for the purpose of our present discussion be designated "non-university hospitals." They include a great variety of institutions—public and private, general and special, urban and rural, denominational and secular, large and small—scattered throughout the United States and Canada. Though they are not university hospitals, one should not jump to the conclusion that they are not "teaching hospitals." For, in a sense, every hospital is a "teach-

*Address made at the annual meeting of the Mount Sinai Hospital Association, New York, March 26.

ing" institution, whether its trustees and its staff are conscious of the fact or not. A hospital may not admit students of a medical school to its wards; it may not have a training-school for nurses; it may not invite physicians to enter its doors for graduate instruction; and it may have no corps of social service workers entering the homes whence its patients are derived; and yet that hospital is teaching its medical staff (visiting and resident), its nurses, its patients, the friends and relatives of patients and the larger public all the time. Its teaching may be bad or good, but teach it does, and constantly. Would that boards of trustees and medical staffs of hospitals were everywhere aroused to lively awareness of this fact and of the responsibilities they assume!

Teaching in Extra-Mural Hospitals

But, aside from this inescapable teaching that falls to the lot of every hospital whether it be conscious of it or not, many non-university hospitals consciously and voluntarily engage in the undergraduate instruction of medical students, in the graduate instruction of physicians, or in both. Some of these non-university hospitals are definitely affiliated with university medical schools more of them perhaps are entirely independent of the medical faculties of the universities. It is to the function of voluntary medical teaching (undergraduate and graduate) by non-university hospitals that my remarks are largely to be confined.

A glance at the conditions of medical education in America would make it seem clear that, from now on, there will be an ever-increasing demand for medical teaching in the non-university hospitals. For, in the first place, undergraduate students can profit by certain educational opportunities that the extra-mural (non-university) hospitals can make available to them and which the intra-mural (university) clinics cannot offer. In the second place, graduate clinical education is almost wholly unprovided for by the university hospitals and it seems likely that for a long time ahead it must be chiefly carried on within non-university hospitals. And, in the third place, those who are in charge of non-university hospitals are coming rapidly to a realization of a very important fact, namely, that medical teaching and research are essential concomitants of all higher forms of medical practice, even in institutions whose primary function is not in the ordinary sense "educational."

Though it is true that the bulk of the clinical training of undergraduate medical students should, and doubtless will, be given in university hospitals, for a part of that training (variable for different schools and for different students in the same school) the facilities of extra-mural hospitals that are adequately equipped and staffed might well be utilized. In the clinical training of the undergraduate, actual work upon patients, under the closest supervision of competent instructors, has become a *sine quâ non*. But the endowments of university hospitals are not as yet, nor are they soon likely to be, large enough to provide the number of beds and the number of paid supervisors of students' work that are required to meet properly the needs of the students in medicine, surgery and obstetrics, to say nothing of their needs in ophthalmology, pediatrics, psychiatry and other special branches. Certain of the students might reasonably be permitted to act as clinical clerks, as surgical dressers and as obstetrical student assistants in the non-university hospitals. The number of patients closely observed by each of the students in the school could thus be enlarged, the maximal number now available for each student in the university hospital being absurdly small. The single undergraduate student does not, it is true, need to study many cases at a time, since it is grounding in principles, rigid training in the application of technical methods and a feeling for accuracy and thoroughness of work that count in the early stages of his clinical training. But he does need for personal study in the wards at least several cases and cases in sufficient variety; these the present facilities of our university hospitals unfortunately do not afford.

Whole- and Part-Time Teaching Combined

The undergraduate medical curriculum is at present terribly overcrowded and there is a strong movement afoot for a reorganization of this curriculum that will lead to a reduction of the "required work" to a minimal amount and to an increase in the freedom of the student for reading, for recreation and for elective studies. If this reform of the curriculum can be brought about, arrangements might well be made for elective courses for undergraduates in extra-mural hospitals in which an abundance of clinical material in the more general branches and in the specialties could be made available for study. The objection that non-university hospitals are not immediately contiguous to the medical school proper has become less formidable since rapid transit has enlarged our ideas of neighborhood.

By utilizing both the university hospitals and the non-university hospitals for the undergraduate instruction of medical students there would be greater opportunity for the students to come into close contact with both whole-time teachers and part-time teachers of medicine. In the ap-

plication of the whole-time principle to the clinical teachers in university hospitals it is apparently becoming the custom to limit the clinical teaching in the public wards of such hospitals to the whole-time men on the staff, largely to the exclusion of part-time clinical men for whom, owing to the relatively small number of beds in the university hospitals, there is no longer room. Many of the whole-time clinical teachers are, at present, young men, relatively recent graduates, who have, since their graduation, specialized in one or another form of laboratory work that can advantageously be applied in the clinics. The students taught by such young, whole-time clinical teachers have the inestimable advantage of coming into intimate relations with scientists who are imbued with the spirit of investigation, who are especially trained in at least one variety of original inquiry and who, at the same time, are striving to develop themselves as clinicians. Undergraduate medical students working side by side with these promising young scientists and potential clinicians share with them the joys of the rediscovery of what is already clinically known while they also have kept ever before them the alluring pathways that lead gradually into the domain of the clinically unknown.

As a supplement to this admirable instruction and training that the newly-conceived university hospitals organized on the whole-time principle can yield, the undergraduate student might well undertake some clinical study in extra-mural hospitals that are manned predominantly by part-time clinical men. In these non-university hospitals he would have the opportunity of working with, and observing at work, clinicians who have already attained to mastery through long experience in hospitals and in private practice. Though the wider gulf that exists between the clinical knowledge and experience of the students and that of the part-time teacher in the extra-mural hospital might, in certain respects, be a drawback, still the students would doubtless gain something in the superior types of non-university hospitals that they would find difficulty in securing elsewhere. For there is, probably, nothing more stimulating to young men who are just entering a profession than the coming into touch with, and the influence of the example of, men in that profession who have achieved worthy success and attained to eminence in the kind of work that the students themselves aspire ultimately to do.

Some, let us hope ever more, of our medical students will desire earnestly to become whole-time clinical teachers of medicine and surgery, but the majority, of course, expect to become practitioners of medicine and to teach, if at all, upon a part-time basis. The examples set and the training available in our better non-university hospitals should, therefore, be helpful to many undergraduate students. Unmixed whole-time clinical teaching has its ardent advocates, as has unmixed part-time medical instruction, but I have always believed and maintained that the best educational results are obtainable by a sensible compounding of these two forms.

It goes without saying that a non-university hospital must measure up to high standards with regard to clinical material available for teaching, to technical equipment, to medical staff, to laboratory organization, to nursing facilities, to social service work and to administrative agencies if it is to be used for the extra-mural teaching of undergraduate medical students; but there are many hospitals that possess the requisite excellences now and many more whose conditions could be brought up to standard. For the sake both of the medical schools and of the non-university hospitals it is to be hoped that many affiliations will soon be made that will prove to be reciprocally advantageous.

Extra-Mural Graduate Teaching

Though extra-mural hospitals offer as we have seen a profitable field for a part of the undergraduate clinical instruction, the largest opportunities for medical teaching in the non-university hospitals would seem to lie in graduate instruction.

The teaching of physicians who at intervals after graduation apply for further education has, as yet, received far too little attention in this country. Graduate schools of medicine there have been, it is true, and some of them have done very good work. Moreover a number of undergraduate medical schools have arranged for short courses, usually in the summer, for physicians and a few of them have even admitted physicians to the undergraduate courses in the university hospitals, though the wisdom of this is doubtful. Further, medical graduates, inclined to original research and adequately prepared to pursue it, can usually find opportunity and encouragement in the laboratories of the clinical and pathological institutes of the undergraduate medical schools.

There has however been lacking in America hitherto any proper organization either for the promotion of "continuation studies" in the general branches of medicine and surgery or for the systematic development of true medical and surgical specialists. As a matter of fact there has as yet been surprisingly little demand on the part of practitioners in this country for graduate instruction of the higher type. Success in practice, as far as material rewards are concerned, has been relatively easy in contrast with the con-

ditions that obtain in Europe and practitioners have not always felt the need of that "periodic brain-dusting" that every professional man should know that he requires. Nor have we as yet formulated any definite criteria for what shall constitute a true "specialist." Our specialists have been trained largely by the apprenticeship system, a method that has its merits, but one not adequate to the present condition of science and art. Many men have been largely self-trained in the specialties, having started with a brief course in some "policlinic" and then having announced themselves as specialists, they have acquired as they went along what skill and experience they have come to possess. The better-endowed and more expertly trained men in the specialties, it is true, have in many instances supplemented their American education by work in European clinics where the medical and surgical specialties have been developed *ad maximum*, each of these, at least in the larger universities, being represented by a special department with its own hospital service and clinical investigative institute. The majority of specialists have, however, been content with a meager special training. The result has been that only a few of our "specialists" have had the scientific foundation in principles and the prolonged and thorough training in practical-technical methods that develop the true specialist who, in addition to the attainment of peculiar skill, feels it his duty and his privilege to advance knowledge and improve the technique of the branch he represents. We have a large number of rather indifferent specialists who are content with a modicum of special knowledge and only fair technical skill. And we have altogether too many "pseudospecialists," men masquerading under the name of "specialists," who are really a menace to public welfare.

The great war taught us much concerning the need of graduate medical instruction in this country. Experience in the army hospitals quickly revealed the fact that a large number of practitioners had, in the medical schools that they had attended, been insufficiently prepared for practical service, and further that those that had been well-prepared in good schools had often failed to keep pace with the progress of medicine after graduation. The surprises of Camp Greenleaf came as a rather rude shock to medical educators and since the war there has been not only lively criticism of the undergraduate medical curriculum but also a strong feeling that systematic graduate instruction in both the general and the special branches of medicine should immediately be provided for.

So pressing is this matter of graduate medical education in the United States that the Council on Medical Education of the American Medical Association has had for some time a committee of distinguished medical educators at work upon the subject. Last year this committee issued a bulletin entitled "Opportunities for Graduate Medical Education in the United States," and two years earlier its chairman, Dr. Louis B. Wilson, made a report upon graduate medical education in Great Britain and France. The men in practice are awakening to the prodigious changes that have been occurring in medicine in the recent past; and many more of them from now on may be expected to resort to teaching centers for graduate instruction.

It should be clear then that the facilities for graduate medical education must speedily be augmented in this country. The opportunities in our larger cities, especially New York, Philadelphia, Boston, Baltimore, Chicago, St. Louis, New Orleans and San Francisco are already better than they were five years ago, and institutions in some of the smaller places, notably, Rochester, Minn., are opening their doors to the graduate student. Still, a more systematic organization of the materials and forces available for graduate instruction is an imperative need. A vast field here lies open for cultivation especially by those that are in control of our non-university hospitals.

Not merely for the sake of the doctors themselves is better provision for graduate medical instruction needed, but also and more especially because the welfare of the public demands it. And there is no use in trying to provide for it on a low plane; on the contrary something higher must be aimed at than the goals set up by the "post-graduate school" of the past. Not that the graduate courses to be given shall all be advanced courses; rather the instruction for the individual practitioner must be suited to his status; it must vary with his earlier training and experience. Provision should therefore be made for elementary courses where they are needed, for advanced research work where men are fitted for it, and for all the varieties of needs for graduate instruction that stand in between elementary studies and productive original inquiry. We have here to cope with an educational problem of the first magnitude, requiring the best thought, the wisest foresight and the well-directed energy of our ablest medical educators.

Every licensed medical practitioner who desires to improve his medical knowledge should be able easily to find out where to go to do so. There should be advisers who will tell him what courses he is prepared to undertake and who will prevent him from entering upon work for which he is not fitted. He should be protected too from the lure of schools that attempt work with inadequate

equipment or incompetent instructors. The abuses they have hitherto existed in some unworthy schools in the granting of certificates and of higher degrees in medicine make it desirable that, in one way or another, the whole matter of graduate instruction shall be regulated either by the Council of Medical Education or by the affiliation of the institutions that engage in graduate medical teaching with the universities.

The question is sometimes raised by boards of trustees and by other laymen—Will not patients object to being used as "material" for the teaching of undergraduate or graduate students? Medical men familiar with the conditions in teaching hospitals will answer emphatically—No. They know how rare it is for a patient to object to medical instruction in the wards. Now and then a very nervous patient may, it is true, be slightly disturbed and complain; but the clinical men in charge of the wards will know how to protect such patients from injury or discomfort. Most patients are, as a matter of fact, proud to be used for teaching purposes. They enjoy the discussions held over their cases, often boasting about them afterwards if their symptoms and signs have seemed to be of particular interest. I have often held amphitheater clinics upon private ward patients, and I have never met with a refusal from a private patient whom I have asked so to appear.

Patients, in my opinion, are on the whole more carefully studied and better treated in hospitals in which medical teaching is done than in hospitals devoid of organized medical teaching. For, in the first place, as I have already intimated, modern clinical instruction demands that the student, whether he be undergraduate or graduate, become a part of the working force of the hospital. More helpful tests can be made, better records can be kept and the details of the therapeutic procedures can be better executed when the personnel of the hospital is thus enlarged.

In the second place, nothing puts a clinical man more on his mettle than to be subjected to the observant eyes and the critical attitude of medical students or of physicians who are pursuing graduate studies. The visiting physician who makes a hurried ward round accompanied only by his intern is all too prone to become a mere routinist. He runs the risk of becoming negligent in the application of newer methods, in the making of sufficiently comprehensive diagnostic surveys, in the planning of an adequate therapy based upon them and in arranging for the execution of all the details of that therapy. The visiting physician who is also a medical teacher and who is repeatedly subjected to the cross-examination of alert and earnest students is, on the other hand, constantly spurred to the betterment of his own activities to the profit of his patients.

And in the third place, in a hospital in which students are clinically taught and in which original researches are prosecuted pressure is continually being brought to bear upon administrators and financial backers to keep the hospital buildings and equipment up to the mark and to add without too much delay those facilities for the newer methods of diagnosis and for the newer forms of treatment that are constantly being devised by advanced workers in all the clinical branches. If hospital trustees and the public could be made cognizant of the pronounced advantages that would accrue to patients in non-university hospitals through regular medical teaching and through the conduct of original scientific inquiries they would not only tolerate these functions, they would demand them.

New York could and should be the leading center in the United States for graduate medical instruction. The clinical material for study in this city is practically unlimited and New York may well be proud of its large number of medical men of ability and distinction who can and should teach. And yet, as every one knows, graduate medical instruction is being sadly neglected in New York as elsewhere in America.

There is one mistake, however, that dare not be made. It must not be thought that an increase of teaching and research in non-university hospitals can be brought about without the expenditure of money. Medical education of the better sort is expensive. When we are struggling toward the attainment of ideals we must not overlook the economic difficulties. All countries, including ours, have spent enormous sums of money during the war, and during the coming decades must pay for that war. Everyone must work hard and must economize; we shall all feel the pinch. This is no time for the cultivation of superfluous fads or fancies, or for the intrusion of any impracticable idealism. Money should not be expended except for very necessary purposes. All will agree, however, that the public welfare urgently demands better medical services, and funds in sufficient amounts must be appropriated for the medical teaching and the medical research that will make those better services possible. To secure these funds we must convince those who are able to give of the importance of the work that is to be undertaken, and we must also give assurance that the execution of the work will be entrusted only to persons who are mentally superior. As the years unroll, it would not be surprising to find the main medical stream of the world flowing through America and we may reasonably expect our non-university hospitals to participate in the determination of direction and velocity of its current.

THE NEW LINCOLN HOSPITAL FOR COMMUNICABLE DISEASES AT RACINE

By E. B. FUNSTON, of Edmund B. Funston Company, Architects, Racine, Wis.

CONSTRUCTION work was begun on the Lincoln Hospital for Communicable Diseases at Racine, Wis., in September, 1920.

The building is 48 feet wide and 134 feet long. It is two stories above the ground floor, located upon a hillside, so that at the south end of the building the level of the ground floor is entirely above grade. It is built of a buff vitrified face brick with Bedford cut stone trimmings. The front of the building faces to the north and the rooms are located upon the east and west side of the building, so that one-half of them receive the morning sunlight, and the other half the afternoon.

The building is fireproof, except for the roof framing. The finished floors throughout the first and second stories are terrazzo with a cove base, making them absolutely sanitary. The wood finish in connection with the door and window openings has been eliminated entirely and a metal casing used instead to receive the plastering. The only wood used in finishing the building being the doors and windows.

Upon the ground floor are located the main kitchen, staff dining room, help dining room, living rooms and sleeping rooms for the help, store room, boiler room, sterilizing room, laundry and drying room.

Upon the first floor are located the doctor's office, examination room, detention rooms, general office, linen room, serving kitchen, rooms for twenty-five patients, including their bathrooms and service rooms.

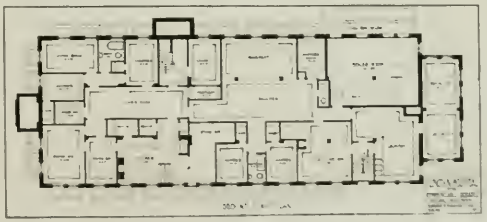
In addition to the accommodations for twenty-five patients upon the second floor similar to that upon the first floor, the second floor provides sleeping rooms and living rooms for the nurses in charge.

The visitors' corridor, in each story located between the two service corridors and opening from the public space, is entirely enclosed with glass and is for the use of relatives of the patients, thus permitting a mother (or other relative) by walking down the visitors' corridor to get a full view of the patient located in any one of the wards. Convalescent patients, who can walk are in the service corridor, can carry on a conversation direct with a visiting relative in the visiting corridor.

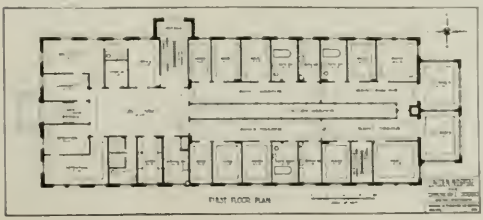
The arrangement for handling different communicable diseases is very flexible, in that the door at the end of the visitors' corridor, when closed, divides each floor plan into two equal units, and the doors located in the middle of each of the service corridors when closed divides the space upon each floor into four equal units. By combining two or more of these units a larger or smaller number may be taken care of as necessity requires.

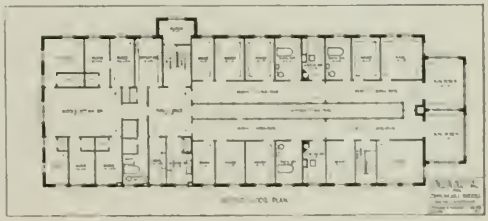
The incinerator for burning all refuse which must be destroyed and which accumulates in the rooms is located at the south end of the building with a door opening into it from the two service corridors upon each floor so that the refuse may be burned without exposure to the outside or to the public.

The arrangement of the entire building, every detail in connection therewith, all plumbing fixtures, and all equipment have been carefully studied out and selected, keeping in mind three essential things: first, sanitation; second, efficiency; third, economy.



The work upon the entire building was com-





SOME SCENES WITHOUT AND WITHIN RACINE'S NEW ISOLATION HOSPITAL

In the left central portion of the layout may be seen the public space on the first floor showing the visitors' corridor in the center, service corridors on either side, and side entrance door at the left. The right central photograph shows the nurses' sitting room on the second floor. Other pictures are self-explanatory. Dr. W. W. Johnston is seated at the desk in the main office.

pleted within the architects' original estimate, and several thousand dollars of the funds realized from the original bond issue were turned back to the City Council. It is believed this building is one of the best and most modern yet constructed for communicable disease hospital purposes.

The contractors completed their work upon the building in November, and it was opened for receiving patients soon after the first of December 1921.

NEW YORK CITY HOSPITAL'S DISPENSARY

By CHARLES B. BACON, M.D., Medical Superintendent, New York City Hospital Dispensary and Out-Patient Department, New York.

A new activity, made possible by Commissioner Bird S. Coler of the Department of public welfare of New York, has been established by the New York City Hospital, on Welfare Island, namely, the City Hospital Dispensary and Out-Patient Department. This activity marks a new epoch in the history of effective service which this institution is rendering the dependent sick and injured in this metropolis of upwards of six million people where it is estimated that 120,000 are sick at all times. This new activity has by no means sprung up over night. It has been a subject of serious thought, continuous endeavor and active cooperation on the part of commissioners, administrative officers and the professional staff for many years.

For many years there existed a reasonable assurance that access to and from the hospitals located on Welfare Island to Manhattan Island and Long Island would be afforded by way of elevator service to the Queensboro Bridge. August, 1, 1920 this service was placed in operation, thereby making City Hospital directly accessible to Manhattan and Long Island. The elevator service is in conjunction with the new storehouse and an integral part of it. Three electric elevators, equipped to handle ambulances, fire equipment and apparatus, trucks, etc., are in operation, together with two passenger elevators. This service furnishes ideal transportation to the hospital. It is only two city blocks distant from the hospital.

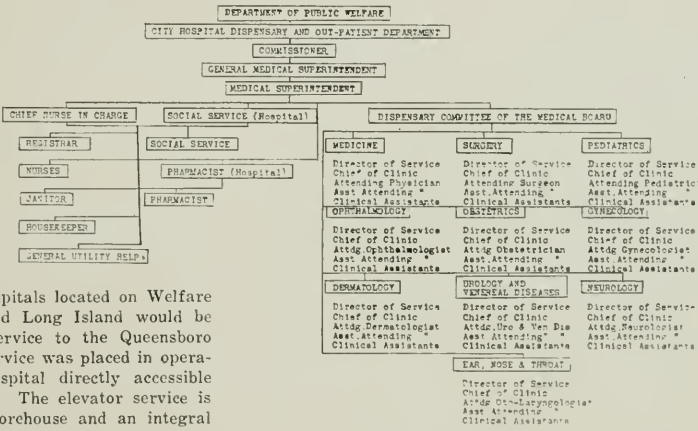
Inasmuch as the Queensboro Bridge starts from 59th Street and 2nd Avenue, a dispensary location in this vicinity at once becomes the place of choice. Fortunately, the city already owned property consisting of a four-story and basement brick building at 220 East 59th Street, between Second and Third Avenues, less than a block from the entrance to the bridge. Extensive alterations have been made to this building, in accordance with a carefully prepared detail and plan, making it an ideal dispensary and out-patient unit. Modern conveniences are afforded for dispensary service, administrative and professional work, a well planned and equipped social service and follow-up department, a pharmacy, and a laboratory, together with quarters for a resident staff to care for the building and receive emergencies at all times. The several clinic rooms are separated from one another by wood and ground glass panel partitions. Ample waiting rooms, affording provision for the separation of men and women, are provided. The rooms are well heated and lighted and are provided with running water; all floor surfaces are covered with linoleum. The equipment throughout is new and has been carefully selected.

A well planned medical record system has been installed, and the dispensary, together with all its activities, is immediately articulated with the City Hospital and its organization. A glance at the chart below shows the plan of organization and authority.

There are ten professional services. Each will be in charge of a director of service, with a chief of clinic who shall be responsible to the director for the service and shall visit the dispensary on his regular clinic days. He will have as many assistants as may be necessary to care for the work properly. The chief of clinic is nominated to the medical board by the respective divisions on which he is to serve, and the position carries with it that of assistant attending to the same service at City Hospital.

The hospital is supplied with a complete dispensary record of each transfer.

Our emergency ambulance station and service incident thereto will doubtless in the near future be transferred to a building adjacent to the dispensary. We believe this



is an ideal way of handling dispensary and ambulance services. The organization is definite, compact and directly articulated with the City Hospital.

Monthly medical staff conferences will most likely be conducted.

It is the purpose of Commissioner Coler, Dr. John F. FitzGerald, general medical superintendent, together with the City Hospital medical board and the medical superintendent, to make this a model municipal hospital dispensary.

GRADUATES UNDER CROSSED ROSES

A pleasing variation of the custom so often seen at military weddings of crossing swords and forming an arch for the bridal pair was seen at the commencement exercises of the school of nursing connected with a church hospital. The choir boys in their cassocks and surplices led the procession, followed by the junior, intermediate and senior student nurses. The intermediate class carried long stemmed roses, and midway down the aisle of the church they stopped on either side and crossed the roses overhead, making an archway under which the graduates passed.

HOW TO IMPROVE THE CARE AND TREATMENT OF THE MENTALLY ILL

By A. L. BOWEN, Former Superintendent of Charities, Illinois State Department of Welfare, Chicago

A model village for mental patients is pictured in this article by Mr. A. L. Bowen, former superintendent of charities in Illinois, where free and open home life and productive activity will be afforded the person found incapable of adjusting himself to the complexities of his environment. Mental cases in this country, Mr. Bowen declares, are treated with little more understanding than in the dark past. The overcrowding of hospitals for the insane and feeble-minded, such as prevails in every state today, is one phase of the inhumanity in our dealings with these unfortunates. The writer sees as a remedy for this condition the placing of such patients in a simple natural environment.

THE Illinois department of public welfare reports that during 1921 the population of its state hospitals for mental cases increased by 900. Growth in the patient population in recent years has far outstripped the limited new bed capacity the state has provided. Men and women have been literally packed away. Space originally designed for parlors, recreation and dining rooms has been filled with beds so close together that one may roll in any direction without falling to the floor.

Crowding has become so acute in the New Jersey state hospitals that the department of state institutions and the governor recently appealed to the voters to approve of a bond issue of $16,000,000 with which to rehabilitate and increase the capacity of the existing state charitable, penal and correctional institutions and to build five new institutions. A concrete argument for the bond issue was the Morris Plains State Hospital with 1000 more patients than it was built to accommodate. The Trenton State Hospital was reported to be as seriously crowded.

The New York state hospitals for some time have been reporting from 25 to 35 per cent of overcrowding. A like picture is presented in Massachusetts. All other states admit they face a similar problem of providing adequate room for their mental patients.

Whatever the cause, which is immaterial in this discussion, the fact with which states must deal is that institution population, especially the insane, feeble-minded and epileptic, is increasing at a very much more rapid rate than the general population, and that they have not been and are not now making provision to meet ordinary humane obligations. It is futile to attempt to remedy the condition by the fragmentary, disorderly, short-sighted and piecemeal methods which have been in vogue.

This condition cannot long continue without revealing to the world a nation whose boasted civilization and charitable instincts are only a flimsy veneer; for we are treating our unfortunate mental cases little better than our ancestors treated them back in darker ages.

In this article, I shall discuss only one phase of our inhumanity to our fellow man: the overcrowding of our state hospitals and colonies, and I shall try to offer a constructive idea for relief.

We are told that insanity, so called, manifests itself when an individual fails to adjust himself to his environment and when his manner of thinking, acting and feeling departs from that which we have recognized as normal. This is not a definition of mental disease but a fair description of a symptom in practically every form of it.

In one aspect, feeble-mindedness is regional and relative. Feeble-mindedness is a state of intellect as measured by some standard which we have arbitrarily called normal. Binet used to say that a lad might be normal in a rural district but definitely feeble-minded and a public menace in Paris. In the simple life of the country where exactions are mild, where complications are easily dissolved, and competition is light, the lad of feeble intellect gets along and attracts little attention. Placed in Paris where confusion is the civic order, where competition for a crust of bread is often savage, and complications are the law of life, this feeble child gives way.

Normal life is a rapid, continuous process of adjustment to changing, shifting environment. When the individual begins to falter, we may well suspect that sooner or later, if adequate treatment is not promptly instituted, he is certain to become a problem for the committing court.

What is the proper treatment for the feeble-minded chap who is found helpless and exploited in the city? Manifestly it is restore him to an environment that will demand of him no more than he can give. The man who has lost control of the daily processes of adjustment should be

placed where adjustments are easier and not beyond his capacity or understanding.

This theory looks easy. But to make it a success in practical application requires a skill, training and experience such as few specialists in medicine or psychology have yet developed.

Treatment Has Been Wholly Custodial

Our system of care and treatment for these classes has been almost wholly custodial. The colony for the feeble-minded has been custodial. To the present time it has been sufficient to the needs of housing the lower grades of mentality, such as the imbecile and idiot. The demand of this day, however, is that the state shall take charge of the higher grades of amentia, the borderland cases as well as those of more marked deficiency. To do this in the style of institution to which we are accustomed will require sums of money that will make the task prohibitive. And even if the money were available for such planning and construction, it would be an economic offense to take from productive activities the muscle and brawn of these unfortunate men and women.

The proposed new institution or the enlargement of an old one can be so planned as to make productive every ounce of the physical energy these classes possess, and their powers of adaptability can be increased by instruction and training.

The time has come when the old type of custodial, menacing, prison-like institution must be made over to conform, so far as possible, to the new ideas of care and treatment of the feeble-minded. It would be little short of criminal waste of public money to inaugurate the building of a new institution along the lines of the old. The experiments made by Dr. Burnstein at Rome, New York, and by others on smaller scales at other places, point the way to the conservation of the usefulness of these people. Bars, locked doors and massive, expensive architectural embellishments have no place in such a plan.

Among the so-called insane the problem is even simpler. They have had intelligence, some of which has not been impaired by mental disease. Their instructor and teacher have soil on which to work.

What a wicked thing it becomes when a housewife and mother who has always been active and efficient in her home is torn ruthlessly from it and transported in straps to the fifth floor of a crowded, architectural monument and there left to deteriorate like a trim ship blown upon the beach. This is exactly what happens to the unfortunate mental patient in ninety-five per cent of the state hospitals, sanitariums or asylums of the country. The skill, the patience and the perseverence which are necessary to learn the reasons for her breakdown and to lead her back into a refuge where she will be free from the complications and competitions that brought about her commitment, are lacking.

I do not argue against the medical and scientific methods of the modern psychiatrist or psychologist. They are essential. They are doing that experimental and studious task which may eventually uncover the secrets of a deep and abstract subject. But their services in her case are not enough. They will advise physical activity and employment but another must plan it and see it through. This woman may be hopeless. My experience causes me to hesitate to use the word. Her plight probably is discouraging. That is all the more reason why she should not be abandoned and left to her own devices on a crowded noisy ward.

Idleness is Curse of State Hospitals

Idleness in the state hospital—oh God, what a curse! We are not likely to have patience with those who contend that their insane friend or relative will be driven mad by longer stay on the wards, for we know that it is not the ward association that condemns the patient; it is the sentence to eternal idleness. Whether the patient be in an excited or depressed state, some sort of physical activity certainly is indicated.

I have heard it hundreds of times: "We don't know what to do for her, she won't work." But I have seen the other side of this picture. A kind nurse or attendant with some native ingenuity has kept at it until she has found something the patient would do (whether well or indifferently is entirely immaterial) and from that minute improvement in tone and conduct began.

We do not need for the new institution or for the expansion of the old, brick and mortar, and steel and bars or screens and locks. We need the simple natural environments of life. We need the human ingenuity to create for each patient an environment in which he can easily adjust himself without producing irritation or friction. When this has been done, a satisfied and contented patient has been made whose labor will have a definite value. We cannot do this by building prisons for these men and women. They must live close to nature and to natural things in a natural manner.

A simple one-story cottage with homelike furniture, a few conveniences, such as a chair, a drawer or a closet in which each patient may place small personal belongings, is the basic requirement of a modern institution for men-

tal cases. We must cease crowding men and women into their wards until all possible opportunity for individuality has been stifled.

Village Life is a Solution

The whole institution should be planned and constructed on the idea of free, open village life. The physical design of a community composed of what we are pleased to call the insane need not be radically different from the ordinary community of 4,000 or 5,000 people with which we are all acquainted. Such an institution, of course, should be provided with a large acreage since the production of foods, of every form and variety, will furnish a great diversity of occupation and employment for a large number of people.

This village would have its streets and walks, its street lights, its post office; its schools, academic, manual and vocational; its hospital for acute physical sick; its infirmaries for the aged and the chronic sick; its laboratories for the study of the human mind; its psychiatrist for mental disease; its specialists, its surgeon, its general practitioners; its athletic field, its amusement hall or theater, its outdoor playgrounds; its churches or chapels; all manner and kinds of shops where first of all it would maintain its own repairs and create all its new buildings and construction. All would be employed, except the old and physically sick. Even the crippled would have something to employ their hands. For employes there would be facilities for recreation and social pleasures; houses for physicians and families; clubhouses for other ranks of employes; a training school for nurses to handle physical illness and surgery; a psychiatric training school for nurses to handle acute mental cases; and a psychopathic institute for members of the medical staff. For the present day attendant, for the most part loafing, brutal, cruel and careless, there would be substituted the teacher and instructor, the foreman who understands his trade and the peculiarities of his strange employes.

Scheme is Not Visionary

What an opportunity is before someone to work out this scheme! Does it seem visionary? Not to me who has seen much of it actually accomplished by piecemeal and by fragments, some here and some there.

This type of institution, almost self sustaining, is the solution of the problem the states face in the rapid and appalling increase of state hospital and colony population. It will not, however, materialize under political spoils administration nor by entrusting it to untrained and undeveloped men and women who have not the vision to see the opportunity.

NEW YORK MASONS DEDICATE $1,000,000 HOSPITAL AT UTICA

What is described by many physicians and surgeons of the state as "the most perfectly equipped hospital in the country," built at a cost of $1,000,000, was dedicated with dignity, pomp and glory, and in cherished memory of those who gave their lives in battle in the World War, by thousands of New York Free and Accepted Masons at Utica, N. Y., April 22.

The four-story structure comprises a main part 220 by 41½ feet in dimension, with two wings extending back from either end of the main body, 87 and 21 feet. It is constructed of red pressed brick, laid in Dutch cross bond. There is a granite base, Indiana limestone trimmings and a red tile roof. It is absolutely fireproof. Besides the large staff it requires, it can accommodate about 250 patients.

Entering the building from the east, the visitor passes by a handsome brick terrace, around a cement lily-pond, and by way of the big main doorway into the imposing lobby, handsomely fitted. Two large parlors are located on the ground floor, as is also a large solarium.

Spacious, light and modern is the main operating room, in the center of the top floor. A glass skylight and a large window give ample light. The walls, 14 feet high, are of green tile.

The wards are equipped with automatic, silence signal lights, and other up-to-the-minute appliances. All corners are rounded. A feature of the top floor is a promenade which runs around the entire building, from which a magnificent view of the hills and surrounding country in the Mohawk valley is obtained.

The new hospital is for Masons of New York State and their families. Members of 1,000 lodges in the state may turn to the hospital if in need.

The million dollar fund was garnered through the contribution of every Mason in the state of something like $1 each. Each lodge has furnished some part of the building in the best way possible.

Funds added to the Memorial Hospital maintenance were raised by the Masonic bodies of New York City at a big exposition of varied nature in Madison Square Garden May 8 to 13. A performance of "La Boheme" at the Metropolitan Opera House for the benefit of the hospital was held May 6 by the "High 12 Club" comprising 5,000 Masons of the financial district, New York.

First impressions are always lasting, as we all well know. Broken and uneven steps leading to the main entrance of one hospital made the strange visiting superintendent wonder what kind of a board of managers and superintendent it had.

HOSPITAL CARE AT SING SING

By AMOS O. SQUIRE, M. D., Chief of Medical Staff at Sing Sing Prison, Ossining, New York

HOSPITAL care of the sick in penal institutions is of the greatest importance when one realizes that frequently the reason men commit crime and are sent to prison to pay the penalty of wrong-doing is because of physical disability, drafted on a person who lacks moral strength to resist temptation. In order that you may have a clearer idea of the manner in which inmates are cared for at Sing Sing Prison, it might be wise to give a brief outline of the examination to which all inmates are subjected upon their admission.

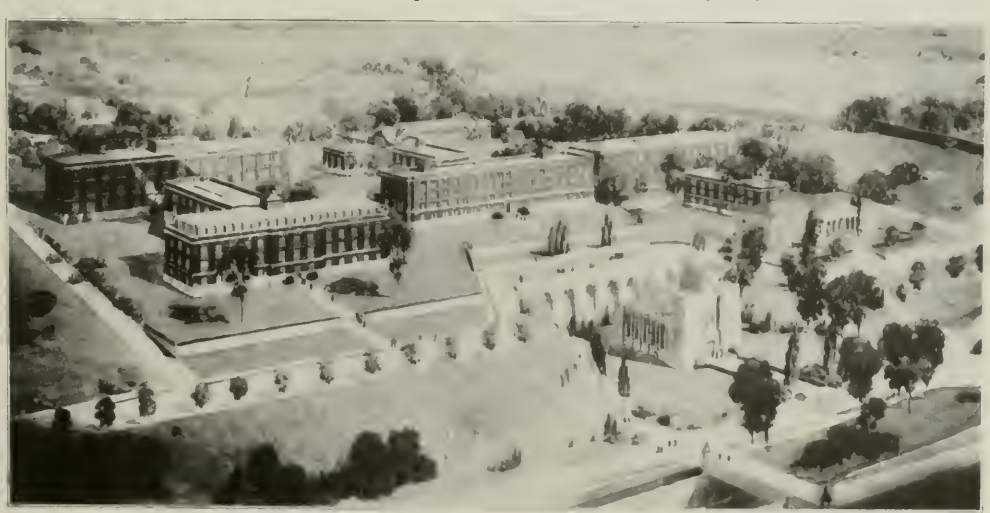
On the day a prisoner arrives he is given a bath and an entire outfit of prison clothing and is then conducted to the hospital where a complete history is taken as follows: Whether father and mother are alive or deceased; if either parent is dead, the probable cause of death; if alive, condition of health at the present time; if there is history of chronic disease or of mental disorder in his immediate family. We endeavor to ascertain the occupation of the parents, and the extent of their education and social condition.

Then we go into the personal history of the man. We find out if he is married and how many children he has. We take his age, his religion, at what age he started to attend school, at what age he finished and the grade which he attained; his ability to study and his interest in school life. We question him about the various occupations he has worked at, the length of time in each place of employment and the amount of wages he earned. This we consider of vital importance, for a man who has worked for one employer a considerable length of time is not likely to be of a wandering disposition, and the fact of his long service indicates to prison authorities that he made good in his occupation.

Complete History is Taken

We next come to his criminal record. We inquire what previous offenses he has been arrested for or convicted of, if any, and the length of time he has served in penal institutions. Then we inquire about his habits, whether addicted to the use of drugs, of tobacco or liquor; if he has ever had venereal disease. Especially is it desirable to know if he has ever been subject to convulsions in any form, for the reason that many criminal assaults occur just prior to or immediately after a convulsion. We seek to learn if an inmate has ever had a nervous breakdown, if he was ever injured or operated upon, or if he has any symptoms of tuberculosis.

When his history has been recorded the inmate is required to strip and submit to a thorough medical examination. If he has had gonorrhea a smear test is made; invariably a Wassermann and urinalysis is made of all inmates, regardless of what their history may contain. At the time



The new Sing Sing Hospital and Classification Prison. The hospital is the building at the near left. It, with the central Cell-Block, are the only two buildings of the layout which have been completed. Below in the foreground is the proposed prison chapel.

One of the four wards in Sing Sing Prison Hospital.

of physical examination, if a condition is found that would warrant surgical interference, a notation is made on the inmate's card. Consent is then signed by the inmate and within a reasonable time he is operated on.

His vision is taken and those requiring glasses are treated or refracted to improve their condition. All in need of special eye treatment are sent to our Eye Clinic conducted by Dr. H. Robertson Skeel of New York, clinics being held once a week. Teeth are carefully inspected and those in need of attention are referred to our visiting dentist.

We have found during the past year that about 21 per cent of new men admitted here have a positive Wassermann, and about 60 per cent have an active gonorrhea or have had the disease at some period, recent or remote. All inmates having a positive Wassermann or who show chancre infection are promptly placed under anti-syphilitic treatment, which consists of from six to twenty intravenous injections of neo-Salvarsan, together with saturated solution of potassium iodine and some form of mercury. This treatment is continued in some cases for a period of three years. All venereal cases are referred to our Venereal Clinic conducted by Dr. Terry M. Townsend of New York, who holds a clinic at Sing Sing once a week.

Inmates having nasal obstructions, diseased tonsils, adenoids, or nasal deformities due to accidents or injuries are listed and referred to our Nose and Throat Clinic conducted by Dr. Harold Hays of New York. For the past ten years the writer, who has radium, has treated all the cases of cancer without cost to the state.

Intelligence Level is Average

Psychological examination is made of all inmates to determine their intelligence level, and we find that the mental level of the inmates at Sing Sing is about the same as found by the United States Government in the draft of the World War. The Adjutant General's Office at Washington reports as follows:

"According to a report prepared by the Surgeon General of the Army, the average adult intelligence among the enlisted personnel of the Army, during the period of the World's War, was estimated at the age of 15, or perhaps 14. Figures representing a classification of the percentage distribution of the mental ages under those of 12 and 13, in the case of 94,004 white recruits and 18,891 negro recruits, are shown as follows:

Mental age	*White draft*	*Negro draft*
Less than 13	47 per cent	89 per cent
Less than 12	30 per cent	79 per cent
Median mental age	13 years	10 years

At Sing Sing Prison we found that out of a hundred consecutive psychological examinations of eighty-two whites and eighteen blacks, the highest mental age of a white man to be 18 years and 9 months and of a black 14 years and 7 months, the lowest mental age of the whites 8 years and 2 months and the blacks 7 years and 3 months, and the average mental age of the whites to be 13 years and 3 months and the negroes 10 years. You will see these figures compare very favorably with those of the War Department in the draft.

Inmates showing a psychopathic makeup are given a mental examination similar to those made by the various state hospitals for the insane.

We have at Sing Sing Prison an average population of about 1,200, but we receive about 1,500 new inmates a year; as soon as any medical and surgical condition is corrected they are transferred to the other three prisons of the state.

Our Sing Sing Hospital has seventy-five beds, the average number of patients being about sixty. During the past year there was performed 101 major operations. Our pharmaceutical department compounded 27,587 prescriptions during the fiscal year of 1921. We have found during the past few months a very great increase in the number of drug addicts and that you may have a

An operating room in Sing Sing Prison Hospital.

clearer idea of this increase I will quote from a paper on drug addictions read by me before the American Prison Association at Jacksonville, Fla., November 21, 1921:

Astounding Increase in Use of Drugs

"I will give you the statistics for the past six and one-half years. We admitted to prison during the fiscal year ending June 30, 1916, 940 prisoners and found ten drug addicts, making 1 per cent of total admission. For the year ending June 30, 1917, with 1,070 new inmates, we found four drug addicts, or 3/10 of 1 per cent; year ending June 30, 1918, with 1,197 new inmates, 11 drug addicts, or 9/10 of 1 per cent; year ending June 30, 1919, with 1,073 new inmates, thirteen drug addicts, or 1 1/10 per cent; year ending June 30, 1920, with 1,490 new inmates, thirty-three addicts, or 2 2/100 per cent; year ending June 30, 1921, with 1,415 new inmates, ninety-three drug addicts, or 6½ per cent. From June 30, 1921 to October 21, 1921, out of 318 new inmates admitted, we found thirty drug addicts, or a little less than 10 per cent.

"You get a clearer idea of what has been the increase by comparison with the average number of prisoners received from June 30, 1913 to June 30, 1918, a period of six years. During that time the average number of drug addicts received per year was 13 1/3. In the year ending June 30, 1920, it increased 110 per cent; the year ending June 30, 1921, it increased 510 per cent. From June 30, 1921 to October 21, 1921, a period of 3 months and 21 days, there was an increase of 789 per cent.

"The vital thing in the treatment of drug habits is the withdrawal of the drug. This problem is not so difficult in a prison where you have complete control of your patient. In the outside world the drug addict who voluntarily enters an institution for cure, generally makes sure of having with him a large amount of the drug in order to meet possible emergency in his old way. He secretes the drug in the lining of his clothes, or in toilet articles, etc., and we have found it at Sing Sing in the body cavities and concealed in the soles of shoes. All drug addicts admitted to prison are given a bath and fresh clothing, and they are not permitted to wear any clothing other than received from the authorities. While under observation and treatment they receive no food from outside the prison, are not permitted to leave the hospital ward, or to receive a visitor, except in the presence of a prison guard. You cannot trust the family or friends who visit them, for only recently we found the sister of a drug addict trying furtively to pass morphine to her brother.

An interior view of the new cell-block at Sing Sing Prison.

A view of the prison from the inside.

Substitutes For Habit Forming Drugs

"Although some writers claim that by the immediate withdrawal of morphine a patient is not responsible for his acts and may commit suicide or even murder, we have never had such an experience at Sing Sing. You must in every case substitute something for the drug, but should not use opium products or cocaine. We use sedatives and cardiovascular stimulants. We have used the bromides, trional and chloral. These drugs are given with the idea of having the patient rest or sleep until the period of reaction is past. As a hypnotic, hyocine hydrobromate 1/200 to 1/100 repeated is effective. If the heart action

becomes weak we use strychnine 1/30 every three hours. The same period of observation, rest and reconstructive treatment follows as in all other methods. The cardiovascular stimulant drugs are useful as stimulating the vasotonic system rather than dulling the consciousness. Camphor and ergotin are used for this purpose."

The medical department of a state prison is of very great importance for correcting the physical and mental condition of those who commit crimes. We have tried to make a distinction between those who are mentally deficient and those who are mentally retarded, believing that mental retardation is frequently due to disturbances of the endocrine glands, to defective eyesight, defective hearing, anemia, bad condition of elimination, epilepsy, etc. Of those who are mentally deficient we find that about 75 per cent can be traced to heredity, which might be due to arrested development or disease of the protoplasm. In these cases the brain develops to a certain stage and is then arrested. It may also be due to an injury to a mother of a child at birth, or might be caused by use of instruments, a fall or injury to the head of a child.

It is our practice several times during the year to give lectures to prisoners on the subject of venereal diseases, drug addiction and hygiene, believing that a great deal of good can be accomplished by a frank discussion of these subjects.

The state of New York has just completed a new psychiatric laboratory at Sing Sing Prison, which cost nearly $1,000,000 and is the last word in scientific construction of a diagnostic building, plans for which were drawn by Lewis Pulcher, state architect. Provision has been made on the first floor for a modern x-ray apparatus and its various accessories; three rooms for the physician in charge of venereal examinations; a surgical laboratory; rooms fitted for examinations of the eye, ear and throat; psychiatric and psychological examining room; dental operating room and laboratory for the use of the staff working in the diagnosis and examination rooms.

On the second floor is a quantitative and qualitative laboratory; a museum, a recording room, a library, and lecture room, and on the third floor are surgical wards, subdivided for major and minor operative cases, together with medical wards so planned as to have ordinary and chronic medical cases in separate divisions. The hospital is to be freely used for detailed observation as well as for treatment. The fourth floor contains a complete operating department with two operating rooms, one for clean and the other for unclean operations, each having separate sterilization facilities, together with preparation, etherizing and recovery rooms; the remainder of the floor is given up for rooms for the male nurses and convalescent solarium.

Sing Sing prisoners in the recreation yard.

In addition to using the building as a clinical hospital for the housing of psychiatric and medical requirements of the prison, it is also planned to use it as a school for the education of male nurses, as it is found that efficiency in prison nursing is directly proportional to the nurses understanding of the relation of scientific, medical and psychiatric knowledge to the peculiar problems of a prison community.

The new Sing Sing, therefore, has been planned as a classification and distributing prison, from which the prisoner, after a definite determination has been made of his mental, physical and economical possibilities, will be assigned to that state institution best suited to his individual requirement.

THE RELATION OF THE DISPENSARY TO THE HOSPITAL*

By JOHN E. RANSOM, Superintendent, Michael Reese Dispensary, Chicago.

SEVERAL able articles have appeared in recent years on the general subjects of the inter-relations of these two organizations of medical service, the hospital and the dispensary. In a further brief discussion of the subject one can hardly do more or better than to repeat some of the things already said and in the light of subsequent thought, experiment and practical experience, develop the subject a step further and attempt, if it may be, to answer some of the questions which have been raised and which continue to appear in the field of institutional medical practice.

The more important aspects of the relation of the dispensary to the hospital may be captioned as follows:

a. organization relationships
b. staff relationships
c. service relationships; including quarters and equipment
d. financial relationships
e. community relationships

Organization Relationships

Quite naturally the several relationships of the dispensary to the hospital depend very largely on whether a given dispensary is a separate, independent, isolated institution or is the out-patient department of a hospital. In the former case the dispensary will as a rule have its own administrative control, staff, equipment, budget, community relationships and problems. Its relationships to hospitals will consist largely in some arrangement affecting the hospitalization of patients found by the dispensary to need hospital care and in the interchange of information concerning the transfer of patients from dispensary to hospital and vice versa. An occasional dispensary will arrange to obtain certain service from accommodating hospitals such as x-ray, electro-cardiographic and pathological laboratory service. The organization relationships of those dispensaries which are the out-patient departments of hospitals to the hospital proper are found to vary greatly. Examples of several types of such relationships as found in New York Hospitals are set forth in the reports published last year by the Public Health Committee of the New York Academy of Medicine.

Decided advantages are possible of attainment in the affairs of the out-patient department if there is a competent, intelligent, industrious and insistent committee of the hospital board to whom the fortunes of the out-patient department are entrusted. Out-patient departments ordinarily require advocates who can actually sit in the seats of the mighty and who can do more than respectfully present its petitions. Perhaps nowhere more than in boards of trustees of hospitals is there need for enlightenment on the subject of the significance and potentialities of out-patient service and no one perhaps has more constant opportunity to keep the problems of this service in the minds of the board than has a live committee of its own members. As to the relationship of the administration of the affairs of the out-patient department to the office of the hospital superintendent, probably all that needs to be said is that whatever person is charged with the responsibility for the conduct of this department he shall have amplitude of time and intensity of interest sufficient to his task. Other aspects of organization relationships between in-patient and out-patient departments affect the integrating of these two parts of the one institution. Ideally there should be one stamp of quality applicable to the service of the hospital as a whole. This is a consummation of which there are as yet few examples, but which, nevertheless, should be not only devoutly hoped for but industriously worked for.

Staff Relationships

The problem most frequently uppermost in the minds of those persons responsible for out-patient service is that of obtaining and maintaining an adequate staff. Here again the problems of the detached dispensary are somewhat different from those of the hospital out-patient department. The limitations of our subject confine our discussion to the latter type of out-patient institution. It is quite generally concluded that it is not feasible, even if desirable, to demand service in the out-patient department of all members of the hospital staff nor to grant ward service privileges to all members of the out-patient staff. Under ideal conditions both might be desirable

*Read before the Annual Congress on Medical Education, Licensure, Public Health and Hospitals, Chicago, March 10, 1922.

†See Seem, R. B.: Relation of the Dispensary to the Hospital, Modern Hospital, 16:78, January, 1921. Neerzard, C. F.: Relation between the Hospital and the Out-Patient Department. Modern Hospital, 17:68-70, July, 1921.

but in reality the former is hardly obtainable and the latter usually impractical. I do not want to be understood as believing that a physician may be competent to serve in the out-patient department but incompetent for ward service nor that some of the diagnostic and therapeutic problems found in the dispensary are not worthy of the attention of the ablest medical men. It is not a question of the relative need of ward and clinic for good medical work, but rather one of staff organization and of the proper placement of staff members in relation to the service of the hospital as a whole. However, we must face the fact that dispensary service is as a rule less attractive to most medical men than are other phases of hospital service, and if we are seeking the good of the hospital service as a whole, we must not, by relieving certain staff members of all responsibility for dispensary work (and it is usually the men of highest rank who are so relieved) make it a criterion of the attainment of staff advancement that one be relieved, in an ascending ratio, of responsibility to the great majority of the hospital's patients.

The out-patient department must not be the staff man's purgatory. Many out-patient organizations have not been making wisest use of the service of their ablest men. The physicians of greater ability and skill on an out-patient staff should be the departmental directors, clinic chiefs, consultants and teachers in relation to the men of inferior rank. Such relationship to be valuable must of course be much more than nominal. To obtain this type of service is in some instances difficult but it is yet to be proved that a dispensary cannot so utilize the service of a high grade physician that he will be interested in what it gives him to do. Anything that isn't impossible is possible. Much depends upon the hospital staff's group concept of the significance of the out-patient department. Here is a field worthy of cultivation by those who would advance out-patient service. If you can sell your out-patient department to your staff you can buy back from that staff all you will need of its service.

If a hospital would build up an efficient out-patient clinical staff it must be able to attract young physicians by other means than giving them ward privileges. Opportunity to see a large number of patients in general or specified departments will satisfy such young men for a brief time only. Opportunity for consultation with and instruction from physicians who know more than they and who are interested to teach them will attract professionally ambitious worthwhile young men. In fact, this is about the only way of attracting them. In this particular, no good dispensary can avoid being a teaching institution.

A young physician in resigning from a dispensary staff said something like the following: "I am resigning from your staff primarily because in proportion to the work demanded of me the return is very small. I joined your staff because I thought it would help me to become proficient in a special branch of modern medicine. But my contacts with the more experienced men in the department have been so infrequent and there has been so little attempt on the part of my chief to give me any instruction that I am keenly disappointed. It seems to me that the chief opportunity you have given me has been to repeat in a greater number of instances the mistakes which I was making before I joined your staff."

A hospital can afford, however, to foster these younger members of its household. If it so desires it can use its out-patient department as a training ground for its future major staff, can as it were bring them up schooled in its traditions, loyal to its service and interested with it in making the hospital progressively approximate its possibilities. The hospital can with safety assure its out-patient staff that when vacancies in the lower ranks of the staff proper occur, first consideration will be given to men who have rendered satisfactory service in its out-patient department.

With proper staff organization and with a degree of magnanimity rightly to be expected in associates and attendings, out-patient staff men need not lose all contact with or knowledge of the patients they refer from their clinics to the wards. Lack of this facility, however, has discouraged many a promising dispensary physician. Occasional joint meetings of hospital and dispensary staffs, both general and departmental, can be of great value to each group, each service and to the hospital as a whole. The importance of a staff member's responsibility for his out-patient and ward duties should not be differentiated by the hospital authorities.

The use of paid staff men in out-patient clinical work is increasing and is in the main a satisfactory method of obtaining a more adequate supply of medical service for routine out-patient work. However, unless in addition to the essentially limited amount of such financial emolument the institution can also offer such professional opportunity as has already been indicated it cannot attract desirable men.

The quarters, equipment, technical service, etc., available for a hospital out-patient department are in many instances woefully inadequate in relation to the volume of work demanded of the de-

partment and to the need for work of good quality. As to quarters it may be said that so frequently is the out-patient department located in the basement that it may well be considered the very foundation of the hospital. The psychological effect upon doctors, patients and all others using them, of dark, dirty, dingy dispensary rooms is of far more import than those who provided such quarters thought, that is, if they thought at all.

It has been said that if you put a pig in a parlor the only thing you change is the parlor, but if you provide dirty, unsanitary, untidy quarters for the use of human beings the chief effect of the combination is not on the quarters. However, it is indicative of an increasing appreciation of the value of out-patient service that the more recent hospital construction has made far more ample provision for out-patient clinical work. the principle which should determine the equipment and technical services available for the out-patient department is that for the type of medical service which it is the function of the department to provide it be ample both in quality and quantity. The questions of whether there should be provided separate x-ray, pathological laboratory and other technical services for the use of the out-patient department can be answered by the application of this principle.

For the adequate and economical care of patients who need diagnostic or treatment service in both out-patient clinic and hospital ward there is need for a far better articulation of these two parts of the hospital. Too frequently from one cause or another much of the work that has been done on a patient in the out-patient department is ignored or repeated when the patient comes into the ward. This is an economic loss which today in the better organized hospitals is being prevented by an interchange of medical records between the two departments or by having a unified record of the patient combining ward and out-patient service.

In some hospitals there needs to be developed a better system in relation to those patients who are referred from the clinics to the wards for observation or diagnosis. Not infrequently the out-patient clinician desires that certain tests be made or certain conditions observed, but is unable to get across to the man on service in the ward just what he wants to learn concerning the patient. Failure to make accurate diagnosis in either department is quite likely to result from the failure to bring together observations made in each. The case of a patient recently reviewed by a diagnostic clinic showed that the patient had been in the wards of a certain hospital six different times supplemented by treatment in the dispensary. It was only when more careful consideration of the findings of the physicians on both services was made that a diagnosis of a condition which must have been existent at the time of his first hospital admission was made. Most hospitals have voluminous records of cardiac patients who come back time after time as compensation breaks down. For many such patients adequate cardiac clinic service including social service could be the means of great saving to both the patient and the hospital. Metabolism ward, metabolism clinic and the dietetic service constitute another integrated in-patient and out-patient service which makes for efficiency and economy. Social service and nursing service in hospital and out-patient departments are in many cases more closely related than any of the other common factors in the two departments of the hospital.

Out-patient medical service would be better if

Observations on Out-Patient Service

There should be one type of quality applicable to the service of the hospital as a whole, both in-patient and out-patient departments.

If you can sell your out-patient department to your staff, you can buy back from that staff all you need of its services.

Were there some way in which the out-patient department could participate in the distribution and utilization of hospital funds proportionately to the real and potential value of its service, this department might have a phenomenal development.

The great possibilities in the field of instruction in hygiene and in preventive medicine, and of participation in community programs for the rehabilitation of individuals and families are just beginning to be realized.

So frequently is the out-patient department located in the basement that it may well be considered the very foundation of the hospital.

The essential relationship of the out-patient department to the hospital is identification with it. They are one institution, and efficiency is largely measurable in relation to the approximation of this essential unity of the whole hospital.

more money were expended on it. The dispensary lacking hospital connection usually has a great difficulty in adequately financing itself. The value and significance of dispensary service is almost unknown to the giving public and as yet few dispensaries have found a way to secure the needed publicity and public interest.

Patients as Sources of Income

Some of these institutions have considerably increased their revenues by developing their patients as sources of income. It is coming to be more and more generally accepted that the patient should bear some part of the cost of his medical service be that part ever so small. Pay clinics of which there is a continually increasing number tend to become entirely self-supporting. For the out-patient departments of hospitals there may be found a variety of relationships to the finances of the hospital most of which are embarrassing to the out-patient department. Not many out-patient departments have a separate budget. Perhaps such an arrangement is impractical or undesirable but if there were some way in which the out-patient department could participate in the distribution and utilization of hospital funds proportionately to the real or potential value of its service the department might have a phenomenal development. But someone has aptly said that the out-patient department is the Cinderella of the hospital household. We might complete the allegory by saying that the prince's ball is the meeting of the budget committee and frequently the fairy godmother is not to be found.

Perhaps with the insistent demands upon the hospital board for more money than it can produce for needs all of which seem vital, it is hardly fair to say that the measure of a hospital's interest in its out-patient service is the money it spends in maintaining it. But sometimes the hospital seems hardly fair to its dispensary service. One instance may illustrate. A certain hospital out-patient department which developed a very large syphilis clinic was able through the fees collected for arsphemaine treatment to take in considerable money. This money since there was no separate out-patient exchequer became a part of the general funds of the hospital and the out-patient department had to beg as insistently as ever for a new worker here, a new piece of equipment there. But however it may be worked out the community that will see that more money is invested in the development and efficient maintenance of out-patient service will promote the health of its members thereby.

Another speaker has ably presented the subject of the dispensary's participation in the community relationships of the hospital. Out-patient service is more adaptable to community need, touches the community at more points, is sought after by a much larger proportion of the population than is the regular hospital service. Its possibilities in the field of teaching hygiene and preventive medicine, of participation in community programs for the rehabilitation of individuals and families are just beginning to be realized. With an out-patient department and social service a hospital can meet the patient on the plane of his need for medical service and can thus fulfill its whole obligation to the community which conceived, created and maintains it.

In brief summary one may say that the essential relationship of the out-patient department to the hospital is identification with it. They are one institution. Efficiency is largely measurable in relation to the approximation of this essential unity of the whole hospital.

NATIVE NURSES IN THE NEAR EAST

By EMMA M. WOOD, Chief Nurse of the Near East Relief, Yedi Koule Hospital, Constantinople.

The Near East Relief Hospital at Constantinople contains children speaking Turkish, French, Russian, Armenian, Hebrew and Spanish, so it is necessary that our nurses be linquists and used to the needs of the native children. The nurses here represent three nationalities: Russian, Armenian and Greek. With the exception of one of the Russians, none had had previous nursing experience when they started here, twenty months ago. Now they do all the nursing for 115 tuberculous children, make all the dressings, give the medicines and have entire charge of treatments and chartings. They are also able to put up either a head or a leg extension. Incidentally, for the weights for this we use American lard pails filled with sand.

How does the native girl respond to training in comparison with American or Canadian women? The answer to this depends greatly upon the individual's educational background. A girl who has been educated at one of the American Mission Schools compares very favorably, being mentally quick and apt with her hands. As the Oriental girl has less endurance than her western sister, more leading and less driving must be used in our training school. The oriental temperament is almost the reverse of the western temperament—quite as different as are the respective customs.

One of the essentials for better civilization in the Orient is a change of customs which will permit the education of all Turkish women. Since the war they are receiving somewhat more freedom, and of the twenty-four girls in training at the American hospital, three are Turkish. Their instructress, Miss Lydia W. Anderson, in comparing them with the Christian pupils, states that the former display a better, though undeveloped, mentality, while the latter have much more worldly experience and are apt with their hands. She holds that after two years of instruction, she will find the Turkish girls in advance of the Christians because of this superior mentality. At present no further conclusion can be drawn, since vocational education for Turkish women is in its infancy.

THE RECORDS OF A FOOD CLINIC

By E. C. CAMPBELL, Dietitian, Boston Dispensary Food Clinic, Boston

TO THE patient and to the casual though interested visitor the clerical machinery of a food clinic is an unthought of factor. But to the workers in a clinic the records are a vital part, constituting the essential framework of the whole. The first cog in the wheels that brings a patient to our Food Clinic is the transfer slip, which he is given by some one of the medical departments.

Form 239-2500-8-21

BOSTON DISPENSARY

No..... Date.....

Name of Patient.....

Age..... Referred } Cross
Discharged } Out One

To .....Dept.

From .....Dept.

This is issued in duplicate form; the original is taken by the patient to the cashier who keeps it and sends the patient to the clinic with the duplicate. This is a voucher as well as a source of information. With it the patient often brings a refer slip which the doctor fills out and sends if there is some special way in which he wishes

Form 210-25 sets-1-21

BOSTON DISPENSARY
25 Bennett Street
REFER TO FOOD CLINIC

.....192..

Name..... No.....

Is Referred to Food Clinic

From ..... Dept.

Purpose .....

Diagnosis .....

℞ (Indicate Relative Amounts of Each Food by 0-1-2-3)

Fat	Condiments
Sugar	Fruits
Starch	Vegetables
Protein	Total Fluid in 24 hrs.
Mineral Matter	Total Calories in 24 hrs.

Special Diets .....

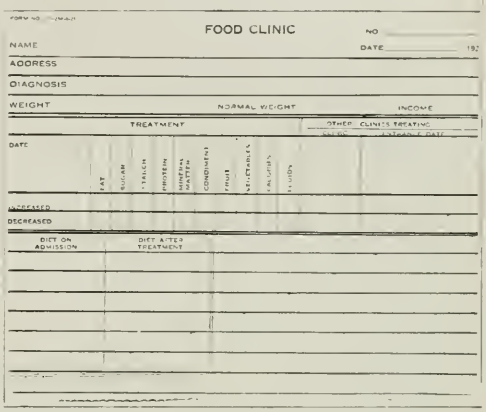
To report back to.....Clinic.....

Referred by .....

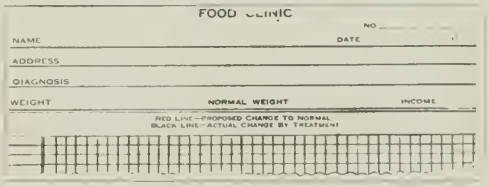
the diet to be arranged. This is also a duplicate form. Its uses are many, as it can indicate any degree of any food factor that may be desired.

The next step is to fill out the patient's record card and two clinic identification cards. In the case of a diabetic patient, a chart and a diabetic record card are filled out.

To return to the Food Clinic record card. The obverse side contains space for the patient's progress at each visit, with other spaces for actual and normal weight, income and diets. These latter



details are filled out by the clinic secretary from data on the refer slip before the patient is sent to the dietitian. For ease in obtaining corroborative diagnosis, room is allowed to note the other clinics where the patient is being treated. Much helpful light is shed on a situation by looking at it from all angles. Under "treatment" is a detailed arrangement for the present and for the desired



diet, and also a scale for indicating the latter with a fair amount of exactitude. This is the same chart that has been mentioned before as being used by the doctor on the refer slip.

The reverse is lined off into a graph arrangement for charting gain or loss in weight for debility and obesity cases, the percentage of sugar present in the urine or blood of diabetics, and for other uses which will doubtless be discovered as it is used more and more. For diabetics there is also a diabetic clinic card, which is used only by the physician for comments and orders. The food clinic card is used by the dietitian, who interprets

DATE	ORDERS	BREAKFAST	FORENOON	DINNER	AFTERNOON	SUPPER	NIGHT

Page_____ Name_____

DIABETIC CLINIC

No _____ Address_____

Form No 236-400-7-21

Date	Vol C C	Sp Gr	Reac	Alb	Acetone	D-acetic Acid	Sodium Chloride	Nitrogen G	SUGAR IN URINE Reduction	SUGAR IN URINE Total G	DIET IN GRAMS Carbo-Hydrate	DIET IN GRAMS Protein	DIET IN GRAMS Fat	DIET IN GRAMS Calories	Carbo-Hydrate Balance G	Naked Weight Los	Non Protein Nitrogen	Blood's Blood Fat	Blood Sugar	REMARKS

the doctor's orders to the patient in a daily menu. For instance, the doctor may order on the diabetic clinic card, a diet as follows: carbohydrate 43, protein 29, fat 39. The dietitian writes out on the Food Clinic record card three meals a day with the size of portion that is allowed, and also gives a copy to the patient. Demonstrations on diabetic food preparations are also written out on the Food Clinic record card. The diabetic chart

DIABETIC CLINIC

Department..... Date..... No.....

yrs. *Industry, Dept., Process*

Name..... Age Occ'n of patient.....

mos.

Address, *1st*..... *2nd*.....

Patient complains of.....

Previous treatment .....

Diagnosis (at first visit).....

Diagnosis (give date).....

Boston Dispensary, Form 52. 10m-6-21

is used by doctor, technician and dietitian. Laboratory findings are noted on one side, and the doctor's orders on the other.

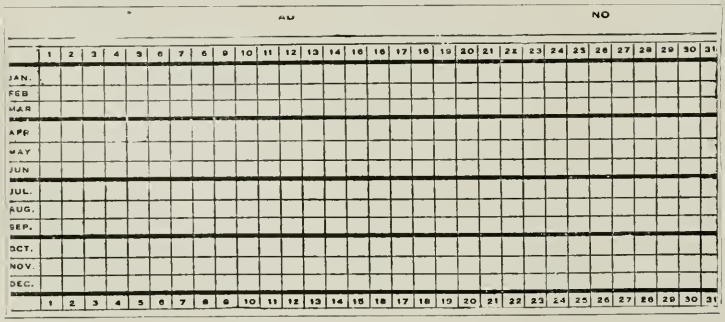
The clinic identification cards are filled out with name, address, record number and diagnosis. Besides keeping this information in tabloid form, convenient at a moment's notice, they also serve as attendance cards. A double file is kept: an alphabetical file and a daily file. A mark from corner to corner of the proper square indicates the date when a patient is due. This is completed to form an x on the day when the patient reports. By these cards the secretary can see at a glance how well the patient has responded. By looking through the date files for the week that has past, she has a list of the patients who are overdue. As soon as a patient has responded and has been treated, a new appointment is made for him a week or two hence, and his date card moved to the corresponding portion of the file.

When the dietitian is assured of the patient's diagnosis, a proper corrective diet is prescribed on one of the forms shown below, as suits the case. The five feedings a day are used for cases of anemia, debility, gastric ulcers and others; while the three meals a day are used for those cases requiring only the usual number of feedings. It will be noticed that the prescription reads "what to eat," a positive construction menu in place of the all too prevalent regulation. "do *not* eat" thus and

BOSTON DISPENSARY
Food Clinic
What to eat for
BREAKFAST
DINNER
SUPPER

BOSTON DISPENSARY
Food Clinic
What to eat for
BREAKFAST
MID-MORNING
DINNER
MID-AFTERNOON
SUPPER

so. By this method the patient feels he may have plenty to eat, whereas by the negative method he is discouraged at the start when he sees the long list of foods he must not have. Just as a check, however, the list of forbidden food may be listed on the back of the sheet, as a reference for the patient. If, after a

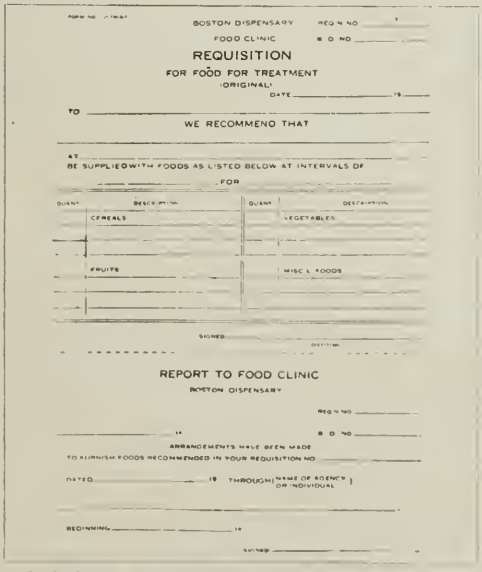


BOSTON DISPENSARY
Food Clinic
WHAT I EAT

Name .....
Address .....
Date .....
"A man is what he eats"

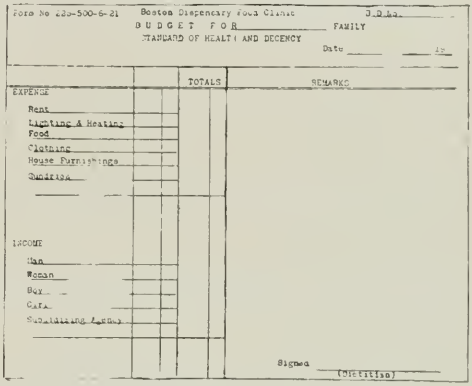
Sunday
Breakfast
Dinner
Supper
Extras

fair trial of the prescribed diet, the patient does not progress as he should, a "What I Eat" book is used to search out the difficulty. This is an attractive little folder with a place on the outside for name, address and date, and with spaces inside arranged for three meals a day and "extras" for every day in the week. This idea of the extras is a clever bit of psychology on the part of the originator of the booklet, for the extras collect all the choice "in between bites" that a patient usually "forgets" to tell about, and that are very often all-important. The main purpose of this book is to check up a patient's diet when there is the least doubt as to the kind or amount of food he is eating. It is especially useful in cases of underweight, malnutrition, overweight, diabetes, gastritis and similar disturbances. In cases where a patient does not write English, as very often happens, this book is the means of interesting other members of the family, who do the writing for the patient. Just the physical act of writing in the book three times a day clinches their interest and secures eventually the best kind of cooperation.


BOSTON DISPENSARY
FOOD CLINIC
REQUISITION
FOR FOOD FOR TREATMENT
(ORIGINAL)
WE RECOMMEND THAT
BE SUPPLIED WITH FOODS AS LISTED BELOW AT INTERVALS OF
CEREALS
VEGETABLES
FRUITS
MISC'L FOODS
REPORT TO FOOD CLINIC
BOSTON DISPENSARY
ARRANGEMENTS HAVE BEEN MADE
TO FURNISH FOODS RECOMMENDED IN YOUR REQUISITION NO.
DATED ... 19 ... THROUGH (NAME OF AGENCY OR INDIVIDUAL)
BEGINNING ... 19

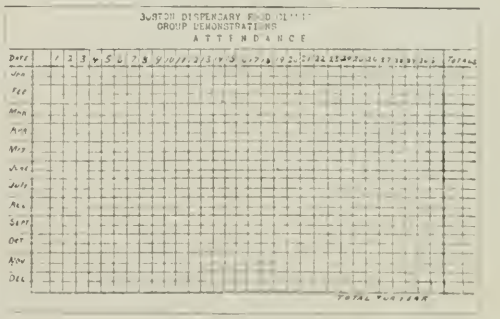
If it is found that the patient is utterly unable to buy the food he especially needs, a grocery order is made out by the dietitian and given to the social service worker, social agency or individual who is to provide the food for treatment. The order is made out in duplicate. The original is sent to the agency or individual responsible for furnishing the food at regular intervals and the receipt signed and returned by them to the Food Clinic. This is usually just a temporary matter of a few weeks or months, until the patient is on his feet physically or financially.

Another great help in sizing up this financial status of the patient is the budget sheet. The


Boston Dispensary Food Clinic
BUDGET FOR ... FAMILY
STANDARD OF HEALTH AND DECENCY
Date
TOTALS
REMARKS
EXPENSE
Rent
Lighting & Heating
Food
Clothing
House Furnishings
Sundries
INCOME
Man
Woman
Boy
Girl
Supporting Agency
Signed
(Dietitian)

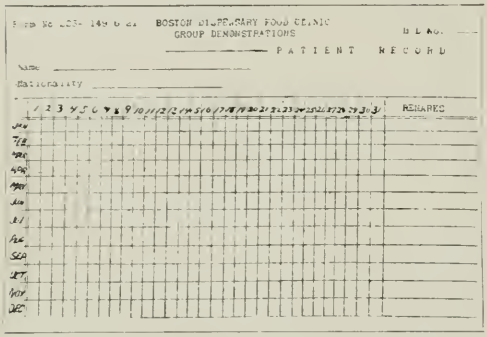
budget, perhaps, is the keystone of the financial situation, for it must be the basis of all constructive work that can be done. This form has ample space for expenses and sources of income, as well as room for "remarks." These are often bits which shed much illumination on the problem. There may be an invalid in the family, a nursing mother or the like.

The group attendance sheet used in the demonstration room shows easily the number of patients from day to day and month to month. This chart is most useful for compiling statistical graphs, which may show seasonal fluctuations as well as daily and monthly variations.

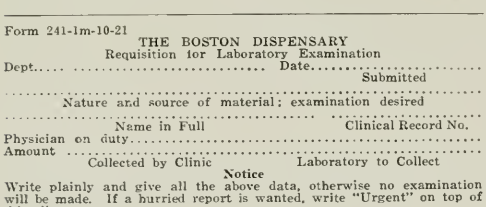

BOSTON DISPENSARY FOOD CLINIC
GROUP DEMONSTRATIONS
ATTENDANCE
Date
Totals
TOTAL FOR YEAR

The patient's attendance record indicates the amount of cooperation exhibited by him. Under "remarks" come such notations as extremes of weather, illness in patient's family, days of re-

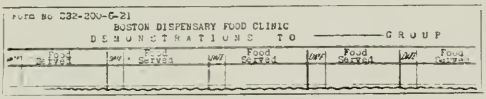
ligious feasts and fasts, etc. These must be taken into consideration. The demonstration records show the foods served to the different groups.



For laboratory work of any kind, the accompanying form is used. At first thought it might


Form 241-1m-10-21
THE BOSTON DISPENSARY
Requisition for Laboratory Examination
Dept..... Date.....
Submitted
Nature and source of material; examination desired
Name in Full Clinical Record No.
Physician on duty.....
Amount .....
Collected by Clinic Laboratory to Collect
Notice
Write plainly and give all the above data, otherwise no examination will be made. If a hurried report is wanted, write "Urgent" on top of this slip.
Report.

not appear that a food clinic would require laboratory work, but its use is readily seen in the cases of diabetes, urinalyses, both qualitative and quantitative, and blood sugar analysis. In cases of suspected anemia, a blood count will show if



progress is made by special diets. These examples are sufficient to show how the laboratory can cooperate with the Food Clinic to a marked advantage to the patient.

The follow-up work, as has already been stated, is carried on with the help of the clinic identification or follow-up cards. After the follow-up card or letter has been sent, its form number or some suggestive sign should be marked with red ink in the square which corresponds to the date when the letter was written. The date for the new appointment may also be noted in the usual way, but also with red ink. By this means the clinic secretary can quickly see just what follow-up work has been done, how much was needed and how well the patient responded. A few forms that have been used are shown herewith. Post cards are sent first, and then a letter.

POST CARD NO. 1.

My dear Mrs. Smith:—

You missed your appointment last week at the Food Clinic at the Boston Dispensary. It is important for you to return, and we shall expect you on Monday, March 21, at 9 o'clock. Let us know if you cannot come.

Yours sincerely,

POST CARD NO. 2.

My dear Mrs. Smith:—

You have not been to the Food Clinic at the Boston Dispensary for several weeks. In your case it is absolutely necessary for you to return for further treatment, and we shall expect you on Monday, March 31, at 9 o'clock. Let us know if you cannot come.

Yours sincerely,

LETTER.

My dear Mrs. Smith:—

It is now many weeks since you have been to the Food Clinic at the Boston Dispensary. The medical doctor sent you to us to be treated, but we cannot help you unless you do your part and come here whenever the food doctor needs to see you. Your trouble is ——— and needs special attention. We shall expect you to return on Monday, June 5. Let us know if you cannot come.

Yours sincerely,

In special cases a personal letter is the best thing to do. In form letters the name of the patient is always inserted at the beginning, as it is the personal touch which brings the patient back to the clinic as much as his aches and pains, and his being "awful weak." Many other form letters could be suggested and used to great advantage, as well as many adaptations of the other forms mentioned in this article. It is well to adjust matters as special occasions require.

MUST NOT INFECT MOSQUITOES

Commenting on printed reports on mosquito control in such diverse countries as Spain and the Dutch East Indies, the U. S. Public Health Service calls attention to the fact that the government authorities who are trying to free a certain region in Spain of malaria refuse to allow sufferers from that disease to remain in the region over night lest they infect the malaria-bearing mosquitos, which feed only at night. Few white people live in the region; and most of the sufferers come from considerable distances and seem to have contracted malaria while working there in previous years. Their blood is examined and they are provided with sufficient quinine to last them for two weeks and are told to go home at once and to report back at the end of that period for another two weeks' supply.

The theory is of course that if mosquitoes cannot find a malaria patient to bite they cannot acquire malaria germs and therefore cannot pass them on to well persons. In other words, if men do not infect mosquitoes, mosquitoes will not infect men.

Incidentally, the Public Health Service notes that the American minnows are being imported into Spain and Italy to help in mosquito eradication.

RELATION OF THE HOSPITAL TO THE MEDICAL PROFESSION, THE PRESS AND THE PUBLIC*

By WALTER E. LIST, M.D., Superintendent, Minneapolis General Hospital, Minneapolis, Minn.

The city hospital of the future, says Dr. List of the Minneapolis General, will combine all the health agencies of the community, both public and private, under its roof. It is the logical home for the visiting nurse association, the public health association, the tuberculosis association, the city health commissioner's office and other health organizations.

Popularizing the hospital, according to Dr. List, can best be done through the press, the motion pictures and public talks. The greatest asset in selling public health is the daily press. The successful hospital, the author of the accompanying article believes, must satisfy the medical and nursing professions and especially the public.

TO DEFINE a hospital is difficult both because of its ever increasing activities to meet the public demand and the rapid advances made in medical and nursing education. First and foremost, the hospital must satisfy the requirements of hospital standardization in the care of the sick and injured and thus justify its cause for existence. Three purposes of the hospital must be emphasized: (1) the best service possible to the sick and injured, (2) medical and nursing education, and (3) the prevention of disease.

In order that the hospital be successful it must satisfy (1) the public through its educational representative, the press, (2) the medical profession, (3) the nursing profession, and (4) good sound business policies in securing the greatest return for money expended. Also the hospital personnel must breathe loyalty and a conscientious desire to serve both the hospital and mankind in general.

The medical profession in its relation to the hospital must be divided into two groups: physicians on the hospital staff and physicians not on the hospital staff.

Physicians on the hospital staff should organize of themselves a self-determining body and, as such constitute the medical board of directors. This medical board is to guide the medical policies of the institution, to judge the character of work performed, to pass upon the medical records and to determine the qualifications of physicians permitted to enter patients into the hospital for either medical or surgical treatment. The superintendent of the hospital should act with this board at its regular meetings; for the purpose of organization it is best that he be elected secretary so that he will keep in touch with all the minutes of said meetings and will be empowered to transmit the policies of the medical body to the board of trustees. The board of trustees should have confidence in the medical board and should support it at all times. This medical board must realize its responsibilty not only to the hospital but to the community, and not permit men to do work within the hospital simply because they are possessors of the state requirements to practice medicine. The qualifications of the physician should be such that the patient will receive every benefit that medical science affords.

The hospital staff can encourage non-staff physicians by organizing, at stated periods, group rounds for men interested in various branches of medicine, thus presenting opportunity both by discussion and inspection for hospital contact and renewed familiarity with scientific progress.

The patient's privilege must be considered in bedside instruction. In teaching or in private hospitals, interesting clinical material should be used both for study and instruction, but the hospital must not forget the patient's prerogative. Too often the patient's permission is not sought and difficulty arises that may be productive of serious harm to both the cause of medical instruction and the hospital. It is only proper that the patient's consent be received and all the facts clearly explained to him so as to cause no annoyance or harmful results.

The non-staff medical man often makes the statement that he has no opportunity of securing a staff position, forgetting the fact that the out-patient department or dispensary is the open door to a hospital staff position. Often times he does not realize that the staff men have spent years working to their present positions, and that such standing does not come over night. A system of promotion from out-patient service to in-patient service should exist for faithful work combined with satisfactory qualifications.

The laboratories, x-ray department and autopsy room should be made available to the medical profession for study and research. The hospital should be the logical meeting place for the county

*Read before the Hennepin County Medical Association, April 3, 1922.

medical society and the county dental society, and medical and dental research libraries should be established in connection therewith, in this way making the hospital the real public health center of the community. Each physician should realize that he is a charter member in the public health organization of the community and the hospital is his meeting place for self-advancement; and he should assist in all promotional ideas pertaining to public health.

Educating the Public

But what means can we hope to educate persons so that they will call the physician when needed and by what means can the hospital be made more popular? By conscientious medical service. How can the interest of the public be stimulated? The answer to this is: (1) the press, (2) motion pictures and (3) public talks.

This whole program could be combined for the purpose of intensive action through the establishment of a Health Exposition to continue for a period of one week. It could be held under the auspices of the county medical society, working in conjunction with the public health association of the community. This campaign could open on Sunday evening and on this occasion the pulpits of the various churches could be used for public health talks, the exposition, showing all the health activities of the community in action, to open on the following Monday. Three-minute speeches on a health subject could be given in all theaters, together with a movie depicting public health service. And now we would call into play our greatest asset in selling public health and the hospital to the public, the daily press. Notices appearing in the daily papers prior to and during such a campaign, announcing the reasons therefore and the value to be obtained, together with a detailed statement of the exhibits and other news items pertaining to public health in general, would result in a renewed awakening on the part of the public and would stimulate many to action. It is necessary to continue publicity concerning the value of hospitals, throughout the year in order to convince the public that it should go to the hospital when ill, and set aside the fear, suspicion and prejudice that may exist. This can only be done by favorable publication of real news concerning hospital life. The hospital is probably the most misunderstood institution in the community, because rarely does anyone take the trouble to find out the real facts. With the hospital the community associates the thought of serious illness and death, so it becomes a place to be avoided as long as possible and the less thought given to this subject the more pleasant the life of the individual. And when necessity does demand such consideration, the afflicted one is wholly unprepared for action and he is plunged into the midst of a psychological chaos that does not improve his general condition. The press, by frequent articles, could set aside many of these false beliefs and render a real public service in so doing.

Let us take a reasonable complaint with a publication of both sides of the story and see what happens in the public mind. Some discharged patient or the relatives of a patient who has just died makes a complaint. The daily press prints the story as news, relating the facts as set forth, together with a statement from the hospital. In a majority of instances these complaints are based upon lack of knowledge or misunderstanding, but the public often forms an unfavorable judgment. Every unfavorable article published, or complaint mentioned, does more damage than can be derived from discharging many satisfied patients. The public will remember unfavorable thoughts particularly when relating to a place they are inclined to dread, such as a hospital.

Confidence of Press is Necessary

Every hospital administrator should consider each representative of the press as his friend and honestly state all the facts in a case; in other words, the hospital must have confidence in the press and the press must have confidence in the hospital. Let the press assume that every hospital is honest in its purpose and should be given the benefit of every reasonable doubt. The hospital must appreciate the press as the organ of the people and that through this contact hospital educational propaganda can be accomplished.

The public appreciates the hospital simply as a place where the sick are given medical attention and has no knowledge of the many activities that make the hospital the public health center of the community. The city hospital of the future will in all probability have all the health agencies of the community, both public and private, in its group. Why is it not the logical home of the visiting nurse association, the public health association, the tuberculosis association, the city health commissioner's office and other health organizations? Such an arrangement would prevent duplication and bring about greater efficiency in dealing with health problems and health programs.

The out-patient department of the hospital as a public health agency is rarely ever considered by the public. Consideration must be given the work being done in its tuberculosis and venereal divisions in cooperating with other agencies. Night clinics have proved their necessity.

Through night clinics opportunity is given a percentage of the population who cannot take advantage of day clinics. Each applicant should be carefully investigated as to his financial condition and care be exercised not to interfere with the practice of the private physician. Then the social service department is called into action, and all agree that it is now necessary to rehabilitate the patient economically as well as mentally and physically.

In this connection we must mention the schoolroom within the hospital. Children confined in hospitals should be permitted to continue their studies either by engaging a private tutor at public expense or assigning a teacher under the direction of the board of education. Lymanhurst Hospital of this city has made one of the greatest forward steps in this country bringing educational advantages to sick children. In the orthopedic hospital the children from the community suffering from orthopedic conditions are called for at their homes each morning, taken to school in the hospital, treated, given proper nourishment during the day and returned to their homes in the evening.

The hospital now becomes an educational institution and the school of nursing must be given every consideration as one of the principal functions in rendering real community service. The better the nursing school the greater the advantage to the patient in that the patient receives better care during the school period of the student nurse and the community profits after her graduation. The student nurse must not be exploited. On the contrary, every effort must be made to give her a sufficient number of hours of class instruction besides adequate supervision in her practical work and her time off duty should be made agreeable and attractive.

In the relationship of the hospital to the community we must not forget the fact that courtesy in our contact with the patients and the patients' relatives is of paramount importance. In the business world every attempt is made to satisfy the customer; in the hospital every attempt should be made to satisfy the patient and the patient's relatives. In fact, some hospitals have established the position of hospital hostess, whose chief duty it is to look after the visitors of the institution. Kindness and courtesy must begin with the entrance of the ambulance attendant to the home, because the first impression made may prevail. The next contact may be with the information office. The personnel of this office should be carefully selected and the hours be divided into various reliefs so that they may better be able to hold up under the barrage of questions asked during their time on duty. The hospital must endeavor to make friends with everybody with whom it comes in contact, and it is through the individuality displayed that human appeal can be made.

Every hospital should take advantage of the establishment of National Hospital Day held May 12 of each year. Through this means inspection and investigation can be encouraged. Each local hospital organization should make every effort to interest the public to come and see for itself and in this way gain valuable information as to the hospital's activities.

In closing, I wish to emphasize this one point, that the hospital, the medical profession and the press should work together for the good of humanity.

HOSPITAL PHARMACISTS IN A. PH. A.

The American Pharmaceutical Association is engaged in a serious effort to bring into its membership the hospital pharmacists of the country who are at present an unorganized group without opportunity to meet and discuss their peculiar problems, according to William Gray, pharmacist to the Presbyterian Hospital, Chicago. A start was made at the annual convention of the American Pharmaceutical Association in New Orleans last September when a part of the program of the Section on Practical Pharmacy and Dispensing was set aside for the hospital pharmacists and the chairman of the section, who was re-elected at that meeting, is a member of this group.

Since that time the secretary of the association has sent a letter to the hospital pharmacists throughout the country inviting them to join the association, and response to this invitation has been fairly good. There are now, perhaps one hundred hospital pharmacists in the membership of the association.

At the coming annual meeting in Cleveland, August 14-19, a portion of the program will again be set aside for hospital pharmacists and they will be invited to present papers and to take part in their discussion. It is believed that it will be to the advantage of pharmacy and of the hospitals to organize hospital pharmacists in the A. Ph. A. rather than to have them drift into some commercial or trade organization.

In the A. Ph. A. hospital pharmacists have the general privileges of membership including the monthly *Journal* and the annual volume or *Year Book* which contains a complete report on the progress of pharmacy for the year, thus keeping the members posted on the advance in scientific and professional pharmacy.

SENIORS SEE NURSING HISTORY IN SLIDES

A very interesting and unusual commencement address was based on the History of Nursing slides which have been collected by Isabel M. Stewart of the department of nursing and health at Teachers' College, Columbia University. The pictures were most enthusiastically received by the audience of friends to whom most of the subject matter was entirely new, and a comparison of present problems with those that are now a matter of history furnished opportunity for the message of inspiration and encouragement to which graduates are entitled on this special occasion.

The MODERN HOSPITAL

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JUSTIFYING THEIR EXISTENCE

THERE are now eighteen state, one sectional and four provincial hospital associations in the United States and Canada. The combined attendance at their meetings last year outstripped the attendance at the American Hospital Association's last meeting. This single fact is deeply significant. What shall these state associations do to meet this opportunity and justify their existence?

Each year a goodly number of hospital superintendents and other executives attend the American Hospital Association's conference. Many others would like to attend but distance, expense and other factors stand in the way. But whether a superintendent does or does not attend the annual meeting of the national association his state association meeting, if properly organized, offers him an opportunity to help his associates in the field and be helped by them such as he can never hope to obtain through the national meetings. Nor is it at all necessary for the state meeting to offer a feeble imitation of the national program in order to do this. Let it be made inspiring and virile in its own right and delegates will instinctively testify to its value. What if the attendance is but fifty or seventy-five? The meeting need not be any the less informative and inspiring. Indeed we have listened to discussions of a high order at a number of state meetings, discussions of which the national association might well have been proud. And none will gainsay that a state gathering offers the appropriate medium for the more informal discussion of problems of immediate moment to the hospitals of the state. It will not be amiss to mention three or four subjects of this kind that state associations found it profitable to discuss: the relation of the state to the hospitals in the light of recent legislation; the nurses' training school as it affects the state; the tuberculosis problem of the state; the recruiting of pupil nurses; and the state code in its relation to hospitals. Some of these subjects were discussed in formal papers, others were grappled with in the more informal round table discussions that have won an important place for themselves at most of these meetings.

Excellent as may be these state gatherings are, we should like to see two or three associations take a new tack. Let us suggest, for example, that actual demonstrations of hospital methods and procedures be held in one or more of the hospitals of the city in which the meeting is being held. Hospital superintendents seldom find an opportunity to visit sister institutions, and this plan in time would give them a chance to visit most of the larger institutions in the state. Let us suggest further that, if it is at all expedient, state associations arrange to meet occasionally at the state hospitals for the mentally ill. These institutions are already receiving a larger share of thought by the public at large than they have in the past and superintendents of general and other special hospitals need to know more about them.

Probably one of the most effective lines of work that a state association can undertake is legislative work. Not only should it muster the strength of the hospitals of the state against all vicious legislation affecting hospitals and foster wise legislation, but through an active committee take the initiative in the formulation and enactment of bills that will protect and strengthen hospitals.

A third activity in which a state association may engage with profit is to stimulate the organization of new and the enlargement of existing hospitals when and where needed. Generally speaking, hospitals at present are located in a more or less higgledy piggledy fashion, but it is entirely feasible for a state association to exercise a controlling influence in this matter. However, it must act intelligently; therefore through a small committee, or otherwise, it should make periodical state-wide hospital surveys. Surely

the state association should be thoroughly acquainted with the hospital situation in its state. Its files should contain thoroughly up-to-date statistical information relative to the number of hospitals in the state; their location; their capacity; the services they render; the ratio of beds to population for the state as a whole, for various sections and for the larger cities; what communities in the state lack hospital facilities altogether and where existing facilities need to be augmented; what special hospital facilities exist and what are lacking. With these facts in mind the state association will be in a position to exercise an intelligent and wholesome influence on the hospital development in the state; without them it is wholly at sea.

Finally a state association may very appropriately play an effective role in the so-called hospital standardization, or betterment, movement. While the phases of the movement selected and emphasized in recent years by the American College of Surgeons may appropriately come up for further consideration and action, there are many other phases of hospital work that call for both improvement and a common understanding. Upon these, after thorough discussion, the state association may very properly go on record by suitable resolutions. Where the subject has a national bearing copies of these resolutions should of course be forwarded to the American Hospital Association.

State associations that carry on at least these four activities, i.e., well-planned annual meetings, constructive legislative work, periodical statewide hospital surveys and the betterment of the hospitals of their state, are bound to exert a constructive influence and give abundant justification for their existence.

EXPENSIVE IN THE LONG RUN

SOME hospitals have no difficulty in raising funds they need to carry on their work efficiently. Others find it difficult to keep their heads above water and not infrequently resort to ways and means of obtaining funds that are economically unsound and in the long run add to, rather than subtract from, the institution's financial burden. One of these questionable ways is to solicit contributions from the manufacturers and dealers from whom the hospital purchases equipment and supplies. By some strange mental quirk these hospitals persuade themselves that an order for goods, instead of being purely a business transaction, somehow places the dealer under obligation to them, and makes him legitimate prey for the solicitation of contributions. Indeed some institutions have gone so far as to intimate that if the manufacturer or dealer refuses to contribute to their financial support he need not expect their business.

If the individual members of a firm or corporation contribute their fair share for the maintenance of the well-conducted civic and philanthropic activities of their immediate community, it may fairly be argued whether as members of a firm or corporation they ought to contribute again to the same local activities; yet many corporations do, and do so gladly, deducting the contributions from the legitimate profits of the business. When, however, a firm with a national or even a regional selling field feels compelled as a matter of business expediency to contribute to a large number of hospitals scattered about the country, it has, in self-defense, no other alternative but to charge the contributions to the general expense of the business. This item included in the overhead by so much increases the selling price of the goods to all the customers, including of course the very institutions that solicit the gifts. If the firm is not actuated by high moral principles it may even attempt to recover this added cost by selling the hospitals goods of inferior quality.

The individual hospital may profit for the moment, but only at the expense of its sister institutions and in the long run it actually loses. In the interests of fair play as well as of economy we earnestly hope that hospitals who resort to this method of increasing their income will discontinue the service.

MORE EFFICIENT HOSPITAL PHARMACISTS

THE attention of hospital pharmacists is called to an announcement of the American Pharmaceutical Association which appears on page 523 of this issue. As the announcement stipulates, this association is anxious to include in its membership pharmacists who are connected with the hospitals of this country in order to give what is at present an unorganized group an opportunity to meet from year to year, discuss their common problems and, through the year book of the association's journal keep abreast of the advances in scientific and professional pharmacy.

At the annual convention of the American Pharmaceutical Association last September the hospital pharmacists as a group had a share in the problem of the section on practical pharmacy and dispensing and this will also be true at their Cleveland meeting which is to be held next August.

Already 100 hospital pharmacists are members of the association. With a little effort this number

might easily be doubled during the next year. Will the superintendents of hospitals whose pharmacists are not members of the association bring the notice on page 523 to their attention and urge them to join? They will be the better pharmacists for it and perform their tasks more efficiently.

ON HOSPITAL LAUNDRY PLANS

OF THE tangible problems of hospital construction and administration the laundry is a class by itself. The larger the hospital the greater the problem. The big hospital is usually found in the large city where land values make it necessary to crowd under one roof all the functions of the institution. Hence the laundry generally goes into the basement where ventilation and light are difficult to obtain. Separation of the rest of the institution from laundry odors and vapors is not always possible. Another problem in such cases is to put wide space between the laundry and the kitchens, dining rooms and food storage.

In strictly modern fireproof buildings it is often possible to locate the kitchen on the top floor. But in the smaller communities where hospitals can spread out, there is no reason for basement laundries, and none for the laundry and kitchen being close together. Nor is there any excuse in a state hospital of one thousand to four thousand beds for its laundry sharing a building with another department.

Laundries in great institutions of this character should be far from the dormitories, kitchens and dining rooms for they are almost as popular "hangouts" for flies as the barns, and certainly the habits of flies about such a laundry are far more filthy on account of the vast quantities of untidy bed linen which pass each day through the washers.

Yet it was not uncommon a few years ago to find a state hospital laundry in a basement beneath the patients' general kitchen. Doubtless this arrangement or some other almost as bad can be found today.

Laundries in such institutions employ a large number of patients. Whether they be insane or feeble-minded, they require careful and intelligent supervision, ample and accessible toilet facilities and, we might add, shower baths and a place to change clothing. It is very important that light and ventilation be plentifully and scientifically provided. The floor plan should be so simple that a minimum of civil employees can give ample supervision.

These essentials have been worked into a new laundry building at the Lincoln State School and Colony at Lincoln, Ill. It is what the department of public welfare calls a "straight line" laundry. It is one story high, of concrete construction, concrete roof and large monitors, with factory sash. In fact it is almost an outdoor laundry. It is 207 feet long and forty-four feet wide without an angle or turn. The soiled clothing enters at one end and passes straight through and out the other end finished. Every employee, civil or patient, can be seen from any point in the building. Nothing has been left to the feeble-minded inmate to do for himself, so far as trained minds can enumerate his needs; everything to conserve his health and comfort has been provided. This building is so far from dormitories, kitchens and dining rooms that there is little danger of fly migration back and forth. For a large institution of this character, the outdoor, straight line laundry building commends itself from practically every problematic point.

Photographer Is Impostor

WITHIN the past month word has come to us from hospitals in several widely scattered cities that a photographer, claiming at one time to represent THE MODERN HOSPITAL *and at another time a news agency authorized to take pictures for the forthcoming meeting of the American Hospital Association at Atlantic City, called to take pictures of the institution. He uses these subterfuges to gain consent to take pictures, copies of which he later attempts to sell to the doctors, nurses and lay-workers. This photographer has no authority to take pictures for us or for the American Hospital Association (See Dr. Warner's letter page 534). Only occasionally do we authorize a photographer to take photographs for us and then only after an understanding with the hospital where the pictures are to be taken. Hospitals are therefore cautioned to deny a photographer who claims to represent* THE MODERN HOSPITAL *the privilege of taking pictures of their institutions unless he presents unmistakably authentic credentials.*

Enslave a man and you destroy his ambition, his enterprise, his capacity. In the constitution of human nature the desire of bettering one's condition is the mainspring of effort. The first touch of slavery snaps this spring.—Horace Mann.

EDITORIAL ON PROTESTANT HOSPITAL ASSOCIATION DRAWS FIRE

CONSIDERABLE thought has been provoked, as THE MODERN HOSPITAL anticipated and desired, by the leading editorial in the April issue, captioned "A Hospital Association Without a Legitimate Field." It has aroused criticism, both favorable and adverse, and it has led the president of the Protestant Hospital Association, the field for which was questioned in the editorial, to issue a statement concerning the aims and purposes of that organization. This statement is published in the accompanying box. Also there are published in this connection several letters which passed between the editor and various officials of the organization in question. The letters tell their own story.

From Dr. English

April 20, 1922.

Editor of THE MODERN HOSPITAL: I am amazed at the audacity with which you attack the Protestant Hospital Association in your leading editorial of the April number.

After reading this article carefully and several letters from men who have hitherto been your friends, I can come to but one conclusion—your evident purpose to injure the Protestant Hospital Association and to discourage membership therein.

If you were the exponent of the American Hospital Association I should think you would have more courtesy than to attack another organization. You are managing editor for a journal having subscribers from both organizations, and now assume to use that organ to give a sop to the larger.

Your article shows that it has been inspired by others. You almost quote verbatim the words of Dr. A. R. Warner, for one.

You have built your argument on false assumptions, and take the position to speak ex cathedra.

We shall prepare an answer, in equally good temper as the article you have printed (this is no place for spleen), and will offer it to you for publication in THE MODERN HOSPITAL. I want to know if you will publish it. If not we shall be compelled to give it to another which *I know* would be glad to have it; in fact more than one magazine wants our answer. But in justice to all concerned it will be offered to you first. Please answer. —(Signed) F. C. English, Secretary-treasurer.

To Dr. English

April 24, 1922.

My dear Dr. English: I have your letter of April 20 relative to the editorial which appeared in the April issue of THE MODERN HOSPITAL, under the caption "A Hospital Association Without a Legitimate Field," and shall be glad to have you send me any comments that you may wish for publication.

I take it that you will wish your answer published as early as possible and I would suggest therefore that you get it to me by the first of May so that it can be included in our June issue.—(Signed) J. J. Weber, Managing Editor, THE MODERN HOSPITAL.

From Dr. English

April 26, 1922.

My dear Mr. Weber: Yours of April 24th duly at hand. We consider that your editorial was in part an attack or arraignment of Mr. Pliny O. Clark, as well as our association. Therefore, Mr. Clark will send to you a reply. It would seem to me as entirely fair if he should give the reasons for our organization.

Dr. Warner confesses to me that "they made a mess of it at West Baden" when they attacked our association. It is very possible that these two attacks will prove helpful to us. I did not have any literature printed till recently, yet with simple letter-writing I secured 150 members for the Protestant Hospital Association. Am now sending out copies of constitution and pamphlet which are enclosed.

Under any and all conditions we are goin' forward with

AIMS OF THE PROTESTANT HOSPITAL ASSOCIATION

By PLINY O. CLARK.

THIS Association now in the second year of its existence is grateful to THE MODERN HOSPITAL *for its leading editorial in the April issue, entitled "A Hospital Association Without a Legitimate Field," for it has called attention to a lack in the program of this new organization: insufficient publicity of its purpose.*

The primary purpose was and still is to unite the Protestant churches in a consciousness of the great unused power they possess for the aid of sick and suffering humanity. Christ first healed the bodily infirmities and then when the need was apparent called the attention of all to life's greatest values. Perhaps we have been so engrossed in the size of the latter task, perhaps in the rush of affairs have overlooked the humbler forms of service at times, perhaps have forgotten occasionally the impossibility of a man living his best when weighed down by some infirmity. However that may be, it is not the purpose of the Protestant Hospital Association to start a reform, but simply to secure cooperation in a task which should challenge the finest spirit of service, of sacrifice if need be, mindful of the need of a thorough scientific spirit in it all, but science filled with love and consideration.

Some churches already have adequate hospital departments, others with scattered institutions need to realize more clearly their problem and its possibilities.

The hospital in America has been noted for its scientific care; yes, but most of all for its complete consideration of the value of the individual person and for the provision for his comfort and welfare.

Just as the missionary finds the hospital a great help, so should the church in America find an ever open avenue of service through her hospitals.

In working out this simple, yet large program, the Protestant Hospital Association will not interfere with any other hospital organization, but will strive to augment and make more effective all worthy efforts.

There may be economic and selfish reasons for hospital service, but the fundamental one is the service of love. And that service reaches its greatest fruition when the religious motive activates that love.

more determination now than ever. I am hopeful that you will admire our spirit and give us your aid.—(Signed) F. C. English.

To Mr. Clark

April 28, 1922.

Dear Mr. Clark: I am enclosing copy of correspondence that has recently passed between Dr. Frank E. English and myself relative to the editorial which appeared in our April issue under the caption, "A Hospital Association Without a Legitimate Field."

From the first letter you will observe that Dr. English intimated he wished to send a rejoinder for publication in the magazine. His second letter states that you are to do so. If this is your intention, I hope it will be possible for you to send your comments to me before May 10 so that they will be in time for publication in our June issue.

Incidentally let me add that this particular editorial is as far from being an attack or arraignment of you as California is from Connecticut.—(Signed) J. J. Weber.

From Mr. Clark

May 3, 1922.

Dear Mr. Weber: Your letter of the 28th has been upon my desk since Monday morning, and is very much appreciated, for you know very well there is no spirit of contention in my attitude concerning the Protestant Hospital Association.

I really appreciated the editorial appearing in the last April issue of THE MODERN HOSPITAL and have no feeling for you personally other than that of gratitude and friendship. I am enclosing a very brief statement which you may care to use. I want you to feel most decidedly however that I do not share in the spirit as expressed by some of my colleagues in the Protestant Association. I am not accusing them of an unchristian attitude in the least. I simply feel that, for my part, it would be unchristian and thoughtless to speak of your editorial as an attack or anything like it.

Always appreciating your kindly criticisms and help.—(Signed) Pliny O. Clark, President.

NEW YORK HOSPITALS BENEFITTED BY RECENT LEGISLATION

Provisions for better hospital care of general and tuberculosis patients was made by New York state in its recently concluded legislative session. The passage of the Lowman-Duke bill extends to counties generally the power to establish and operate public general hospitals. This bill further provides that any county not having a tuberculosis hospital may accommodate such patients in a pavilion of the general hospital.

The Lowman-McGinnies occupation therapy bill, also passed at the last session, legalizes the creation and operation of the occupational therapy departments which have already been established in ten tuberculosis hospitals of the state and opens the way for the extension of this service not only to other tuberculosis hospitals but to public general hospitals as well. The law provides for the establishment of an occupational therapy fund to be used for purchasing materials, this fund to be replenished by repayments for material when the articles are sold.

The county general hospital bill opens the way for twenty-three New York counties which have no provision whatever for the care of tuberculosis to provide such care and at the same time make hospital provision for the care of injuries and sickness generally. Most of these counties do not have sufficient population, assessed valuation or enough tuberculosis cases to justify the construction of special sanatoriums.

FUNDAMENTALS OF ORGANIZATION*

By C. C. BURLINGAME, M.D., Executive Officer, Joint Administrative Board, New York.

The PURPOSE of any organization is:

1. To accomplish a piece of work or service with the greatest efficiency, maximum economy and minimum effort.
2. To effect the personal development of the people functioning in the organization.

The following are ESSENTIAL to the building of any organization:

1. To think straight.
2. To think simply.
3. To definitely define responsibilities.
4. To train personnel to meet responsibilities.
5. To train personnel in its relationship to other parts of the organization.
6. The development of a budget system which places the responsibility upon those who have within their power the immediate control of expenditures.
7. The development of an accounting system sufficiently simple to guage the efficiency of operation under the budget.

Things to AVOID in building an organization:

1. Unnecessary multiplication of jobs requiring exceptional ability.
2. Unnecessary multiplication of jobs that have no future.
3. Wasting time of specially trained personnel.
4. Involved procedures.
5. Adding any additional step that can be avoided.

Having a step No. 1 followed by a step No. 2, by No. 3, by No. 4, etc., is not in itself good organization. This carried on ad infinitum develops "red tape," one of the most expensive and disorganizing influences in any organization.

*These principles found useful by Dr. Burlingame in his executive work have their application in the hospital world and because of this fact were requested for publication.—Editor's note.

HEALTH WORK AMONG THE INDIANS

In accordance with its policy of making available to sanitariums and others impartial information on the health activities of the United States government, the National Health Council has issued a mimeographed report on the health section of the U. S. Bureau of Indian Affairs. This report presents to the public for the first time a description of the important government health work among Indians. The report is the sixth of a series planned by the council, others already published having included:

Division of Vital Statistics, U. S. Bureau of the Census.
Children's Bureau, U. S. Department of Labor.
Women's Bureau, U. S. Department of Labor.
Division of School Hygiene, U. S. Bureau of Education.
General Report of the Government Health Activities (with chart).

About a thousand copies of these five reports have already been distributed in response to special requests.

Copies of the report on the Bureau of Indian Affairs or of any of the other reports may be obtained without charge from the Washington office of the council, 411 Eighteenth Street, N. W., Washington, D. C., it is announced.

FIXING A RATIONAL BASIS FOR ENDOWMENT OF WARD BEDS AND PRIVATE ROOMS

"YOU must not look a gift horse in the mouth" has long been regarded as a dependable, if inelegant, old truism. Until recently hospitals have abided by this sage suggestion in respect to endowments of ward beds and private rooms, but occasional departures from the precept have been attended with a success that cannot be overlooked.

Some years ago the sum for the endowment of a free hospital bed was generally placed at $5,000. At that time the income on $5,000 was sufficient for the support of a free bed. But with the increased cost of maintenance, it frequently requires five times that amount to support by its earnings on interest that same bed. Since hospitals do not care to lose the $5,000 bequests and donations offered for the purpose, many of them have alloyed their endowment figures to stand at $5,000; not a few of these have then been operating endowed rooms and beds at a deficit.

Believing that a rational basis for the endowment of either private rooms or beds in general wards should be worked out on the basis of per capita costs per annum, THE MODERN HOSPITAL sent out inquiries to a number of progressive hospitals with a view to learning their regulations on endowments. Some such scheme as is in practice at Michael Reese Hospital in Chicago where the endowment fund is expected to yield interest to cover eighty per cent of the yearly cost of each bed, based on the daily per capita cost, was thought logical. Such a basis allows for a twenty per cent vacancy during the year.

A Study in Contrasts

The Bridgeport (Conn.) Hospital, as will be described later, is another of those institutions which has looked the gift horse in the mouth and lost nothing by it. Anyone who wants to endow a free bed in Bridgeport Hospital for $5,000 can do that very thing and the income of that sum at five per cent is applied toward the bed. The donor gets the privilege of nominating an occupant for that bed *just so long as the income lasts.* This practice is being applied with success in other institutions in the identical or in modified forms.

A study in contrasts are the experiences recounted in this symposium by superintendents of the Hartford (Conn.) Hospital and the New York Hospital. At New York Hospital a person may endow a bed in perpetuity for $5,000; in one year the institution realized a net profit of $173.67 per bed on each one so endowed. Quite different was the experience at Hartford. During that same year Hartford Hospital showed a net loss of $22,561.34 on its endowed beds. Out of that experience the hospital has recently limited the period to which nominees of the donor may remain in the hospital by the net income of his gift.

Profit at New York Hospital

At New York Hospital, writes the superintendent, Thomas Howell, there are no endowed rooms but a number of beds are endowed for $5,000.

"The question of increasing this amount," writes Mr. Howell, "has been informally considered but no action taken. I know that many hospital officials feel that $5,000 is inadequate for the purpose, but our experience has been that the endowed beds are occupied on the average only a few days a year and the net result is a profit to the hospital. Some donors, of course, send in a large number of patients but others send in none or one at long intervals. The average occupancy of the endowed beds in this hospital in 1920 was seventeen days. As our per capita cost was then $4.49 this would show a total outlay per bed of $76.63. If the $5,000 endowment is figured on a 5 per cent basis this gives an annual income of $250. Accordingly, our net profit per bed that year was $173.67.

"In two or three instances employes' beneficial organizations endow a bed for one year for $300, but, as in this case the bed is generally kept filled, the hospital sustains a large loss. The persons occupying these beds generally would be free patients if it were not for membership in the beneficial organizations so that anything received from them is a help.

"It is not our custom to set aside a particular bed and place a tablet on it, but we do place the names of donors of beds in perpetuity on a tablet in the main hospital building."

Loss on Hartford Endowed Beds

"For us," says Dr. Lewis A. Sexton, superintendent of the Hartford Hospital, Hartford, Conn., "the endowment of free beds in rooms and wards is a very sad story. We do not know that other superintendents make so complete an analysis of the free bed situation from year to year as we do, but our loss on endowment beds became so great that we had to take some definite action in the matter and this was done on December 17, 1919. At that time our board of managing directors passed a resolution which reads as follows:

"'Voted that gifts in trust, or otherwise, made hereafter to the Hartford Hospital for the support of free beds or free private rooms therein, if accepted, shall be accepted by said hospital under an express agreement between the donors or their personal representatives and the hospital as follows:

"'Free service shall be furnished by the Hospital to the nominees of such donors or their representatives during such period or periods in any fiscal year as the net income from such gifts accruing to said Hospital during such fiscal year shall defray the average daily cost to the hospital for such service.'

"This seems to us the only rational procedure. We accept endowment funds for private room accommodation on the same basis; by this, it does not mean that any particular room in the hospital is set aside but that a private room may be had by the donor under these conditions. They have always chosen a $5 per day room in cases of this kind. By this method it will be seen that a free bed can be endowed for any specified amount. This enables persons who have, say $1,000, to create a free bed fund which would otherwise be entirely inadequate. Of course, from the income on $1,000 they do not get very many days treatment. That, however, is a matter that usually does not concern the person creating the memorial very much.

"Prior to the passage of this resolution all persons giving a free bed did so with the incentive that they would be entitled to three hundred and sixty-five days free treatment. With per capita costs such as we have had for the past four years you can readily see that this was a very bad arrangement for the hospital."

"An analysis of the free bed situation at the Hartford Hospital for the fiscal year ending September 30, 1921, showed the following results:

Income from free bed patients	$15,912.93
Loss on free beds	*22,561.34*
Total cost of free beds	38,474.27
Number of patients treated	629
Number of days' free treatment	9,562
Average days' stay	15
Average cost per patient	$61.17

The Montreal General Hospital accepts $5,000 and $10,000 public ward bed endowments but does not take any funds for the endowment of private beds. Of the practice there, Superintendent A. K. Haywood, M.D., declares:

"We have at the present time regulations stating that $5,000 will endow a bed in the children's ward and $10,000 will endow a bed in the public wards. The interest from these sums naturally does not cover the cost per day of maintaining these beds if occupied the year round. At the present time the shortage of beds in Montreal means that these beds are occupied continuously. We have a great number of these beds, but some of them were endowed years ago when the cost of endowment was set at half these figures. If it is going to be done on a purely business basis, I agree that any sum set aside to endow a bed fully should be sufficient to yield interest at least to the extent of eighty per cent of the cost of that bed. Unfortunately, hospitals cannot look a gift horse in the mouth. For that reason we feel that while it might not be strictly businesslike to set a lower rate than the actual cost for each endowed bed, it would lose us many donations of from $5,000 to $10,000 were we not to accept them for that purpose. We make it a plan to erect a small tablet over each bed in memory of the donor. We do not accept any funds for endowments of private ward beds, nor do we think this is good policy, except in the case of graduate nurses' associations, or other kindred societies.

Favors Endowed Departments

"An endowment fund for a department such as the pathological department is an excellent feature, for it often relieves one of the financial worries entailed in the upkeep of such a department. The modern pathological department must be used as an aid to diagnosis and treatment, regardless of whether the patient is public or private. Research comes after—this is a necessity. If you are going to give a service such as this to the community, it is quite reasonable to understand that salaries and overhead expenses cannot be met from the revenue received from laboratory work. For that reason, again I say that the happiest pathological department is one that has an endowment fund in connection with it. The same thing applies to the social service department, out-patient department, and in fact any department of the hospital from which one cannot legitimately expect a profit.

"Another excellent endowment fund is that in connection with a nurses' home. There are instances where, if a nurse has been ill, it is desirous to send her away for convalescence, either to her home or to friends. She may not be in a financial position to bear the expense of railway tickets, etc. We have in this hospital a fund of $10,000 for that purpose. We use the interest from this continually to assist nurses in training for this and other purposes. This is not given in the form of a loan, but as a gift. I am a great believer in making sacrifices in any hospital for the sake of a general endowment fund. The board of management is indeed wise that sets itself out to secure an endowment fund, and it does seem most unfortunate that so many of our hospitals that have been running for many years are still the possessors of small endowment funds due to using gifts of money for current expenses."

Wesley Has Two Bases for Endowment

At Wesley Memorial Hospital in Chicago two schemes of endowment are in practice. For ward beds the hospital asks for $5,000 endowment, but in the case of private rooms it uses the per capita cost per annum as a basis for the amount of the endowment. E. S. Gilmore, superintendent of the hospital, writes as follows of the two systems:

"About twenty-five years ago the cost of maintaining a hospital ward bed was so low that the income from $5,000 would do it. It, therefore, became customary for hospitals to ask for $5,000 for the endowment of a ward bed. The cost of maintenance in a hospital has increased until the income from $5,000 will now support a bed only for a portion of the year. However, the amount seems to be fixed in the minds of people and it is probable that in the aggregate more money can be got on the basis of $5,000 gifts than can be on the basis of $10,000 or $15,000 gifts. Many people can and will give $5,000, but few can or will give $10,000 or $15,000. Hence, the figure $5,000 has been allowed to remain. The amount should be converted into the endowment fund of the hospital and no particular bed assigned for free purposes.

"In seeking endowment for private rooms we have tried the other plan, that of capitalizing a room at a figure, the income of which would support the room for full time when possible, for three-quarters time, or even half-time when it is necessary to give such concession in order to get the money. As a matter of fact, a hospital will be entirely safe in the majority of cases if the estimate is that the room will be occupied only fifty per cent of the time, as people able to give money in sufficient amounts to endow rooms usually do not abuse the privilege.

"It is, of course, necessary that the hospital should have a working arrangement with the staff such as will permit competent staff men to give their services free to patients occupying free beds or free rooms as it is invariably the desire of the donor that the patient shall be cared for absolutely without expense of any nature to him."

Practice at Bridgeport Hospital

"Our basis of endowment is cost," says Dr. John F. Bresnahan, superintendent of Bridgeport (Conn.) Hospital. "At the present time, our patients cost $28 a week. For the sake of doing business in a big way as regards endowments, we will say that they cost us $25 per week or $100 a month, roughly.

"If anyone wants to endow a bed they should provide funds which will yield at least $100 a month at five per cent. You can see, therefore, that it would necessitate $24,000 to yield at five per cent $100 a month.

"Now people are not endowing free beds at the rate of $24,000, so we tell them they can endow a free bed for $5,000 and that we will apply the income of that $5,000 at five per cent and give them the privilege of nominating the occupant of that bed for as long a time as the income may last.

"We index our free beds and require an authorization from the nominee of each bed before the patient is placed upon it. The free beds are in the wards with the exception of one, which is maintained by the Nurses' Alumnae Fund."

Presbyterian Hospital, Chicago, has the following scale of endowments:

A donation of $50,000 entitles the donor to name a

twelve-bed ward, which shall remain as a perpetual memorial to the donor or any other individual he wishes.

A donation of $20,000 carries the same privilege for a four- or six-bed ward.

A donation of $10,000 entitles the donor to designate a room in the private pavilion which shall be named as desired by the donor and remain as a perpetual memorial.

A donation of $7,500 endows a bed in perpetuity.

A donation of $5,000 endows a bed during one life.

A donation of $5,000 endows a bed in the children's ward in perpetuity.

A donation of $300 annually endows a free bed in the general wards.

A donation of $100 or more constitutes the donor a life member of the institution.

A yearly donation of $10 constitutes an annual member.

"It will be noticed from the above rate table that a donor can designate a room and name as desired," says Asa S. Bacon, superintendent of Presbyterian Hospital. "This means that the hospital reserves the right to put free patients in the room or bed endowed. If a donor insists on placing free patients in a room or bed, we limit the number of days per year that a room or bed can be used free, however, we try so far as possible to discouragement this form of endowment. We have one endowed room, however, where the donor is limited 150 days per year; anything above that, he pays the regular rate.

"Hospitals should be very careful how they accept endowments. For instance, one of the large hospitals in London has an endowed room for the use of stone in the kidney cases only, as they have very few of these cases the room remains idle most of the time at a great loss to the hospital. This room was endowed in perpetuity; therefore, you can see how the hospital is losing out on a proposition of this kind.

"It is our policy so far as possible to accept endowments without reservations so that we can determine the charity work to be done.

"Your idea of working out endowments on a basis of per capita cost would not work with perpetual endowments. For instance, you accept a perpetual endowment when a day cost per capita is $2 per day, and as during the war, the cost may jump up to $6 per day; if you are duty-bound to keep a bed occupied with free patients 365 days in a year, you would lose money pretty fast; on the other hand, if you could accept a large number of endowments when the cost is high, you would benefit when the cost per capita were reduced. However, your idea is worthy of consideration, and I would like to have more time to think about it and study it out."

Scheme at Vancouver General

Dr. Malcolm T. MacEachern, superintendent of the Vancouver General Hospital, makes the following statement regarding that institution's method of endowment:

"Our principle is to set aside a sum which at six per cent interest per annum will accrue sufficient amount equivalent to the earning capacity of that ward bed or room for the entire year. To illustrate this: it would take the sum of $730 per year to endow a bed in our public ward, for which we make a charge of $2 per day. That would mean setting aside of a sum, approximately $12,000 as an endowment, to bear interest at six per cent per annum. In the case of a private room at $5 per day it would take $1,825; that would mean an endowment of approximately $30,000. We do not consider the occupancy of the bed or room at all as to length of time occupied or by whom. We have no endowments here of ward beds or rooms. All our endowments come without any strings attached. Though our schedule calls for $2 per day for a public ward, that does not mean our per capita cost. We get a fixed grant extra of $1.05 per day. Of course the per capita cost would be the best basis to work an endowment on. However, I feel that any endowment to an institution would be better to come without any conditions as to what it shall do."

Chapman's Idea of Cost Basis

Regarding endowments based on per capita cost per year, Frank E. Chapman, director of Mount Sinai Hospital, Cleveland, says:

"In principle there is no question as to the soundness of such a practice, but as a matter of fact I believe in order to do this you would set the goal of the endowment far beyond the ability of the average individual to pay and would therefore defeat the very purpose of your endowment. As a matter of fact, I do not believe that endowed beds are used to any great extent, that is, by individuals endowing them. I question if our private rooms are so used on an average of ten days a year per bed."

The following scale of endowments is in use at Mount Sinai Hospital, each endowment being accepted on the express condition that the hospital trustees are unrestricted by its terms:

$10,000 will dedicate a private room.

$5,000 will dedicate an adult's ward bed.

$3,000 will dedicate a child's ward bed.

The donor of such gift may from time to time designate a patient to occupy a dedicated bed, free of charge. After the death of the donor this privilege may be exercised by his appointee named in his last will or in any instrument duly executed and attested. Appropriate plates bearing the designated name are used permanently to commemorate such gifts.

$2,500 will dedicate an adult's ward bed for twenty years.

$2,000 will dedicate an adult's ward bed for fifteen years.

$1,500 will dedicate an adult's ward bed for ten years.

$1,000 will dedicate an adult's ward bed for five years.

The foregoing schedule also governs the dedication of children's beds except that the above amounts are each diminished by $250.

$500 will dedicate an adult's ward bed for two years.

$400 will dedicate a child's bed for two years.

$300 will dedicate an adult's ward bed for one year.

$200 will dedicate a child's bed for one year.

Appropriate plates bearing the designated name are maintained to commemorate such gifts for the specified term.

Endowments at Barnes Hospital

Dr. L. H. Burlingham of Barnes Hospital, St. Louis, writes that his institution has only a few endowments and that the donors have up to the present time used the beds rarely. The following regulations govern endowments at Barnes Hospital:

A contribution to the endowment fund entitles the donor to the following privileges according to the amount of the gift:

$1,000 entitles the donor to nominate one patient per year to a bed in the general wards. The contribution will be acknowledged on a tablet in the main corridor of the hospital.

$2,500 entitles the donor to nominate three patients per year to a bed in the general wards. The contribu-

tion will be acknowledged on a tablet in the main corridor of the hospital.

$5,000 entitles the donor to name a bed in the general wards which shall remain as a perpetual memorial plate on bed and privilege of nominating a patient to this bed during life of donor.

$10,000 entitles the donor to name a bed in the general wards which shall remain as a perpetual memorial with memorial plate on bed and privilege of nominating a patient to this bed during the life of the donor and one successor.

$10,000 entitles the donor to name a room off the wards which shall remain as a perpetual memorial with bronze memorial plate on door without privilege of occupancy.

$15,000 entitles the donor to name a room off the wards which shall remain as a perpetual memorial with bronze memorial plate on door and privilege of nominating a patient to this room or to a bed in the general wards during the life of the donor and one successor.

$20,000 entitles the donor to name a ward of two to four beds which shall remain as a perpetual memorial with bronze memorial plate on door and privilege of nominating a patient to a bed in the wards or to a room off the wards during the life of the donor and one successor.

$25,000 entitles the donor to name a room in the Private Pavilion which shall remain as a perpetual memorial with bronze memorial plate on door and privilege of nominating a patient to this room or to a bed in the general wards during the life of the donor and one successor.

$50,000 entitles the donor to name a ward which shall remain as a perpetual memorial with bronze memorial plate at ward entrance with privilege of nominating a patient for occupancy or to a bed in the Private Pavilion during life of donor and one successor.

PROFESSIONAL EFFICIENCY IN THE HOSPITAL*

By C. S. WOODS, M.D., Superintendent, Methodist Episcopal Hospital, Indianapolis, Ind.

EVERY person who is somewhat familiar with hospital activities must be impressed with the fact that the fundamental matter of professional efficiency in the institution has not had the consideration which it unquestionably deserves. There has been no lack of attention to economics in various departments, such as the laundries and kitchens, and it is always easy to get the ear of boards of trustees on the cost of supplies, cost of the care of the patient, expenditures for improvements and receipts. Even the public is pretty well informed on these particular points.

We have been obliged recently to ask ourselves seriously whether or not hospitals were performing the function for which they were brought into existence, and in answering the question I believe that it is true that we have found that many of them were only indifferently satisfying the purpose of their organization.

The hospital can only show that it is worthy of the confidence of the public when it actually enhances the possibility of recovery of the patient. If the home can do as much for the patient as the hospital, then the hospital is failing in its great purpose. If the prevention, diagnosis and cure of diseases are problems of science, clearly the institution must have a scientific program which cannot possibly be carried out in the home. The hospital must have those persons who, and facilities, technique, and spirit which, immensely contribute to the speedy recovery of the patient.

The hospital must be seen as a link in the chain of various public health agencies. It is probably the most important factor in the public health program. Within the institution are combined most of the functions of a public health department. The curative procedure may for a moment seem to obscure the preventive efforts. As a matter of fact, however, a part, and it may be true, that the largest part of the service of the hospital to the public is preventive. We who are in daily contact with the professional activities of the hospital know that if more attention were given to the thorough examination of the patients and a study of the various relations of their diseases to probable future trouble, the number of chronic invalids would certainly decrease.

This introduces, then, the idea of professional efficiency in the institution. Let us consider the subject from two points of view. First, the professional organization and work in the institution. Secondly, the visiting physician and surgeon. The admission of patients to the hospital commits the institution at once to the very serious and difficult task of providing those facilities for thorough and expert diagnosis and treatment, and care, which the highest ideals of the most devoted professional men may comprehend. It is fair to say that the institution which does not freely accept such obligation which is imposed upon it by the admission of the patient, is still unworthy of the confidence of the patient, the medical profession, and the public. It is true that the patient himself may not know that the hospital places itself in such relation to him. The officials of the institution and the board of trustees must recognize the patient's possible ignorance of the hospital's true function, and all the more conscientiously strive to discharge its great duty toward him.

The first step which the institution must take is the equipment of laboratories. Surgeries are laboratories in which the surgeon carries out, according to recognized technique and well established rules, proper surgical procedures. The efficiency of the surgical laboratories is not only very difficult to acquire and maintain, but it is indeed rather inadequately appreciated. The prevention of all surgical accidents in the surgeries is an ideal which ought to be religiously sought. I am convinced that the hospital itself must, in a very large measure at least, assume the leadership and indeed dictatorship in this particular regard. We must be impressed with the inescapable duty which rests upon the hospital to establish and develop such operating room technique, which is the nucleus for the many other things which gather around it, that the patient who is subjected to surgical procedure in the operating room shall always be protected from accidents, ignorance, and negligence on the part of anesthetists, assistants, and operating room nurses.

I believe that anesthetics are generally badly administered. There will perhaps remain for many years a difference of opinion as to the choice of an anesthetic, but there certainly cannot be any question about the right of the patient to be anesthetized by a well trained, dependable anesthetist. We are certainly impressed with

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the desirability of unremitting effort to protect the patients from added physical injury by the administration of an anesthetic. I believe that nearly every death that has occurred from the administration of an anesthetic could have been prevented, first, by a careful, painstaking study of the physical condition of the patient; and second, by a well trained anesthetist. I mean a person who not only knows how to give an anesthetic, but one who also has the courage to assume the position which is his when he administers the anesthetic. The surgeon is not responsible for the anesthesia. The anesthetist himself is responsible, and if an anesthetist feels that he cannot assume the hazard which may be involved in a given case, he should have the courage to refuse to give the anesthetic, just as the surgeon has the prerogative to decline to operate when he thinks the risk is not justifiable. Our hospitals should regard the administration of anesthetics as a matter of the greatest gravity, and one which may ever be susceptible of improvement.

The sterilization of all goods which may conceivably have contact with the field of operation ought to be a thoroughly controlled and carefully watched procedure. There should not be any guesswork about the sterilization, and in order that we may know just what has happened in the sterilizer, bacteriological examinations must be frequent and reliable. No one who has given this subject any attention at all has failed to find an occasional incomplete sterilization so far as bacteriological cultures can determine. If such examinations are not made, there will always be room for uncertainty as to what has happened. The same may be said about the sterile water which is often shown by bacteriological examination not to be sterile. There can be definite knowledge about these particular matters, and it is the hospital's duty, which it cannot relegate or escape, to know the facts.

The technic in the operating room must not be a matter of routine only, but it should be thoroughly well understood by those who participate in it. They should know the reason why certain things are done, and so familiar should they be with the principles that any violation of them, however slight, would instantly be detected and be sufficient occasion for retracing steps, or for corrective measures. It is clearly the duty of the surgical supervisor to know the principles of asepsis. I fear operating room supervisors sometimes do their work mechanically and without thorough and refined knowledge of the reasons why certain things are commonly done. Elaborate technic may or may not be employed; efficient technic must be adopted, and there should not be any reasonable excuse for accidents such as infections which may be traced to the supervisors and nurses in the surgeries. I recognize the difficulty in reaching that high degree of operating room technic which practically is unattended by accidents, but we cannot hold ourselves any the less rigidly to such requirements. There must be a keen conscience on the part of every person who is in the organization of these laboratories, and that conscience must be constantly be maintained.

The organization and operation of other laboratories are not less important than the thorough organization and management of the surgical laboratories. I am aware that not every hospital is so located that it can command such well trained laboratory workers as would be required to make a laboratory of pathology and clinical medicine, and x-ray laboratory, and the pharmacy, those indispensable aids to thorough diagnosis and treatment which institutions that are situated in large cities may employ. Still, there is certainly a vast difference between what may be done and what is actually being accomplished in the smaller hospitals at the present time.

It has been an experience of all of us, perhaps, that physicians and surgeons may fail to use the laboratories and other facilities of the institution, because they seem not to appreciate their service. We know that this is unfair to the patient. It certainly does not improve the quality of professional work in the institution, and if such a course were persisted in by many physicians, those hospitals which are now doing ordinary work would continue to do so, and those hospitals which are attempting to attain higher levels would degenerate.

It has happened that patients have been subjected to abdominal sections, when an examination of the blood would have revealed a typhoid infection. Patients may have been given pretty severe treatment for autointoxication when a blood examination would have shown a high leukocyte count. Many other instances of serious import could be imagined which might be greatly modified by the application of laboratory methods. It is clear then, that the hospital should recognize that it must not only possess equipment, but it must employ capable persons to do technical work in behalf of the patient. It is not too much to say that this is the prime requisite. All that has been said about the surgical laboratories and the clinical laboratories, may be said with quite as much truth concerning the x-ray, and dietetic laboratories. I think I am safe in saying that if the hospitals can actually become efficient in these particular things, they will then justify their existence.

The institution must provide the nursing. A certain part of the nursing must be professional. Inferentially, a certain other part may be non-professional. I believe that we are far away even today from the determination of the principles of scientific nursing. The institution must be responsible for all kinds of nursing. The patient does not distinguish between that which is professional and technical, and that which is commonplace, and indeed, institutions themselves consider nurses and nursing as everything that relates in any way between the nurses and the patient. Professional nursing is more than care, it is a part of the professional management of the case. I do not wish to enter upon a discussion of whether nursing is a profession or a mere trade. I insist, however, that since the institution is responsible for nursing, and a certain part of it is technical, and cannot be accomplished by persons who do not have special education and training, then that part of it should be efficient and well done. I conceive the nursing problem in the institution really to be the most difficult one which we have to solve. The selection of supervisors and teachers is a very difficult matter. There are relatively few women who are ambitious to do institutional work, and fewer still who are educated sufficiently well to do it. However, the officials of the school for nurses will determine the quality of work which the students will do, and will fix the character of the school. The school is an educational institution. We have been training young women. We have not been educating them. Let us drop the word "training" and speak only of schools for nurses. The school for nurses has the obligation of preparing the young women who enter it for the practice of the principles of nursing. It is a nice question as to how much academic work shall be required and how much time shall be devoted to practical observation on the floors of the hospital. The hospital is a laboratory in which the student nurse does her work. That school is perhaps best which so combines the daily observations with the class work as to make the student nurse an important factor in the recovery of the patient.

Many hospitals which are doing very good work cannot secure the service of interns or house physicians. It is un-

necessary to discuss the reasons why this is true. It is, however, important to say that wherever institutions can induce young medical men to serve in such capacities they should do so, because the professional organization is not complete without resident physicians. From the hospital's point of view, these young men are primarily in the institution to contribute what they may to the restoration of the patient to health, and if they, or any one else, should unfortunately be guided by any other principle, the institution will almost surely fail in the accomplishment of its work. The intern is completing his preparation for the practice of his profession and the institution must give him facilities, and instruction, and opportunities which justify his residence in it. But he is none the less obligated to share with his co-workers in accomplishing the task of healing the sick.

The professional records may be very useful and valuable. There seems to be, however, an indifference to them on the part of some professional men. The institution is probably more responsible for such an attitude than the profession itself. Correct forms on which to make records and fairly satisfactory systems for filing them must be adopted. The requirement that case records should be taken is right. First, the patient has a right to expect such attention from his physician as a case record would require. Secondly, a physician should give his patient such systematic and logical study as a well written case record would require. Thirdly, the public has a right to expect that the institution which receives the sick shall at least vouchsafe a thorough study of diseases, and fourthly, the institution has a right to know for itself that the physician gives his patient so much attention, and that the just requirements of the public are fully met.

The discussion of the part which attending physicians and surgeons assume in a program of medical efficiency in an institution is deferred to the end of this paper because it is by far the most important.

First, there is a mutual obligation resting upon the attending physicians and surgeons and the officials of the hospital.

Second, every professional man who comes to the institution to do work become pro tempore a part of the organization. He therefore, places himself voluntarily under the responsibility of knowing and maintaining the standards of the institution.

Third, he is making his share of the history of the institution and helping to build its tradition, and what he is, is reflected by the institution itself. It becomes apparent at once that the physician is largely forming the character of the institution, and he is himself being influenced by the institution and its standards. If he merely regards the institution as a place to which to take his patient, and if the institution is not worthy of higher respect on his part, then of course, he does not wish to become a part of such an organization. But if the institution is really efficient in the professional things, then he does himself discredit when he takes the view that the hospital is but a place wherein to house the sick. The institution cannot become professionally efficient without the devoted cooperation of all those professional people who work in it, and the physician himself can positively do more toward the improvement of the professional work in the institution than anyone else. By his constructive criticism, his willingness to join with his co-workers in elevating standards, his insistence upon the most faithful observance of scientific principles and the rigid application of them to his work, he becomes after all, the teacher and the example for all of us. His use of the laboratories to aid him in diagnosis and treatment, his enthusiastic support of those efforts which look toward the elimination of unscientific and undesirable features, his willingness to adopt new methods and to use them, all contribute to the better nursing and treatment of his patients.

It does not seem to me that there can be any argument about the prerogative and duty of the institution to exclude from the use of its facilities, and the employment of its professional personnel, those men who do not respect the exalted ideals of the finest medical work. Here and there we find an effort to destroy the purpose of organizations of medical men in institutions, and to wipe out the authority of the institution in the determination of the quality of professional service. I think that we should boldly meet all such attempts with the facts. We should go straight to the best men and women of our communities with a program of medical efficiency; we should try to lead the public to see that there is such a thing, and that it is altogether desirable. Professional efficiency in the institution can in no way interfere with the ambitions of good men. If it should block the schemes of unworthy medical men, we should be rather grateful.

PHOTOGRAPHER CLAIMS CONNECTION WITH NATIONAL ASSOCIATION

Editor of THE MODERN HOSPITAL:

There is a man traveling about the country representing himself sometimes as an agent of the American Hospital Association and sometimes as an agent of other organizations of the hospital field who claims to have been sent by such organizations to take photographs in and about hospitals. If this privilege is granted, he returns to the hospital to sell copies of the photograph to nurses, physicians and other employes of the institution. The latest report of his presence came from Kentucky.

Apparently there is no fraud contemplated other than the misrepresentation of the connection and the profit from the sale of the photographs constitutes the complete returns. The proposition, therefore, is simply one of the securing of permission to take and sell the photographs.

This open letter is to inform hospitals that the American Hospital Association has no photographer in the field in anyway connected with the Association and that any official representative who may be sent out in the future will be provided with complete and proper credentials making confusion as to authenticity impossible.—A. R. Warner, Executive Secretary, American Hospital Association.

MUSIC AIDS ANESTHETIST

The use of music in anesthesia work is proving highly successful in the Robert Packer Hospital in Sayre, Pa., where it has been tried out for the past six months. Of this practice, Dr. Donald Guthrie, surgeon-in-chief at the hospital, writes:

"We employ it during the administration of ether in children and find that together with suggestion from the anesthetist it has an extremely soothing effect upon the child being anesthetized, and we have seen a great reduction in fright since employing it. It is a common thing now to have the majority of our children go to sleep without screaming, struggling or crying. We do not use the music during the state of recovery from ether anesthesia, but employ it in all cases of nitrous oxid and oxygen anesthesia. We see a marked difference in the way the patients wake up now from the gas as compared with the excitement and fright which we observed before using music."

THE LIBRARY IN THE MENTAL HOSPITAL

By EDITH KATHLEEN JONES, Former Librarian, McLean Hospital, Waverley, Mass.

SO MUCH has been written during the past few years on hospital libraries, their value, methods of administration, and the necessity of having librarians of experience and personality in charge of them, that no attempt will be made herein to dwell upon these already well advertised details. Instead, an attempt will be made to indicate, not the essentials common to all hospital libraries, but a few points of difference which those dealing with mental cases should understand.

The need of a pretty, cheerful, central library, important in a general hospital, is indispensable in a mental one, for while in the former the patients are almost without exception confined to their beds, in the latter there are few bed patients, and the others are restless and want to get away from the monotony of the wards. An attractive library to which parole patients can go at will and other patients at stated periods with nurse or attendant to browse among the books or read the new magazines is in itself a therapeutic factor.

It probably will surprise many persons to be told that one can put a much better class of reading matter into a mental hospital than into any other, with the possible exception of the sanatorium for tuberculosis. Patients in general hospitals usually stay for short periods; their minds are wearied from operations or illness; they are enveloped in the lassitude of convalescence; and they want little but fiction and, with few exceptions, they want that fiction extremely light. Mental cases, on the contrary, stay in hospital for weeks and months and years. Their minds are often alert, their physical condition good, and time hangs heavily on their hands. They demand all kinds of books, fiction and non-fiction, and many of them are able to pursue lines of study or research. One paranoid patient, while in a hospital, wrote two books on his profession in which no trace of his delusions can be found. Both these books are authoritative, well written, extremely popular, and are in nearly every large library. Several women patients attended courses on fine arts and English literature designed for nurses, and successfully passed examinations. Mental patients are as much interested in the outside world as anyone; they want maps, atlases, dictionaries, reference books of all sorts. The librarian is called upon almost daily to settle discussions on the wards.

A corner of the library in the U. S. Public Health Service Hospital, Parker Hill, Boston. This is not a mental hospital, but it shows the popularity of an attractive reading room with open shelves.

In spite of the demand for solid reading, however, the great desire is for fiction,—romance to brighten the dreary hospital round, detective stories to sharpen the wits, tales of adventure to widen the walls until the patient is off on the western plains or fighting pirates and hunting for hidden treasure on the high seas.

This brings us to the matter of book selection, the most important of all hospital library problems. To speak of books as having therapeutic value is, in a way, misleading, for although we all know some stories which "leave a bad taste in the mouth" and others that are as stimulating as a tonic, yet in general their influence is so subtle as to be almost incalculable. Their value lies in their power to divert the mind into wholesome channels or to rest the brain, wearied with pursuing its own ideas around and around. It is only when a systematized attempt is made to exclude all possibly harmful literature and to supply certain types of books to individual patients that the library can be termed a positive therapeutic factor.

To the normal person, preoccupied with business affairs, a novel is read for recreation or for its literary style; it may be trashy, it may be worse, but the chances are that it slips from his mind as soon as read, leaving little or no impression. But with an abnormal person it is different. He has little else to occupy his mind but his own sufferings and what he reads. With him the problem novel may assume a personal aspect over which he broods, and morbid story may depress or excite, the book with a gruesome episode may throw him into an agony of fear. Hence, in selecting books for a mental hospital, one must realize that the factor of wholesomeness is the all-important one and that to it mere literary value must be sacrificed; upon the thoughtful, judicious, sympathetic choice and administration of books hangs the success of the library.

To say that books must be wholesome conveys no definite impression to many persons, who probably would think "The Sheik" an "interesting" book for a hospital. Let us put up a few "don'ts" as signposts along the trail of our discards. Don't provide for mental patients stories having insane, degenerate, epileptic or otherwise mentally affected characters; stories in which suicide is accomplished or attempted, especially if the means to suicide are carefully described (as in Wells' "History of Mr. Polly"); morbid or depressing novels, tales which deal with unhappy childhood, marital infelicities, physical deformities which warp a man's nature (like "Sir Richard Calmady") or which end unhappily; sex problem or erotic novels, though they be numbered among the best sellers; "psychic," psychological or self-analytical stories, however well written; ghost stories, because they never can have satisfactory endings and they haunt the patient; stories which have gruesome or bloody details or which depict horror (Stevenson's "The Merry Man" and Conan Doyle's "The Hound of the Baskervilles" are examples). In addition to this taboo fiction, discard most if not all books on psychology, religious discussion, law, medicine and mental hygiene; never give a patient any books on these subjects without the approval of the physician in charge.

It may be asked: "What books remain?" There are plenty of clean, charming, entertaining stories, although they will seldom be found among the most widely advertised fiction; fine, strong, thoughtful novels—"the big, brave books," as a drug addict called them, "none of your pretty, cheerful little books, but stories in which men fight big spiritual battles and win through"; detective stories which are not psychic and which dwell upon the skillful unraveling of the mystery rather than on the details of the preceding crime; books with pictures, travel, history, biography, poetry and essays, books on trees, flowers, birds, animals, mountains, etc.

Given a library with all the proper and none of the improper books—what then? How is the patient to get the ones suited to him? If there is a librarian (and without one the library is about as useless as a laboratory without a director) she should study the case records, talk over cases with doctors and head nurses, try to understand the trend of the abnormal mind. For library purposes mental cases may be loosely classified into three groups: the depressed, the exhilarated, and those with paranoid ideas. Depressed patients are often suicidal, the exhilarated and paranoids sometimes homicidal. All are self-centered, and most of them have delusions, confusion of mind or wrong habits of thought. The first thing to be done is to divert their minds from these abnormal grooves and, if only for a few minutes at a time, make them think of something normal, happy, and outside of themselves. To the depressed patient, unable to fix his attention, give a book of pictures, followed in a few days by a short story which will not tax his mind, and so lead him gradually to longer novels with more involved plots. The exhilarated patient usually knows what he wants and will make his own selection, but get him interested in some particular subject, if possible.

The patient with delusions or paranoid ideas presents the most difficult and at the same time the most interesting problem, for he will read his own delusions into whatever is given him and one must be very careful to steer clear of his pet aversions and, when they are harmless, cater to his ideas. For instance, in one mental hospital was a young man who thought he belonged to the English nobility and had been kidnapped in infancy. Very much exhilarated, full of delusions, for some weeks he would not stop walking and talking long enough to do anything, but one day he demanded a book. The librarian knew the case, knew that the book must be English, must be exciting enough to hold his attention and must be well written. She also knew that if he did not like the book she sent to him she might never have another chance to help him, for he was not lenient toward mistakes on the part of the hospital staff. Very thoughtfully she ran over the books on the shelves, hesitating over this, rejecting that, finally selecting John Oxenham's "Flowers of the Dust," a thrilling story of the Franco-Prussian war with an English hero and a charming love story. The patient read the book, liked it, wrote home his first coherent letter for months, giving a very good review of the story, demanded more of the same sort, quieted down, learned to conceal his delusions, and was discharged from the hospital. The librarian makes no claim that reading that book cured him, but she does claim that that particular book was just what he needed to divert his mind and steer it into more normal channels of thought.

The library of McLean Hospital, looking across the hall into the "trustees' parlor," in which are 3,000 volumes of literature, travel and history. The library numbers 9,000 volumes in all, with a medical library (separate) of 6,000 volumes.

In addition to work with individuals, there should always be a carefully selected assortment of books in the sitting room of each ward, changed every week or two. Destructive patients should have plenty of magazines and books not worth rebinding. Reading aloud has in several hospitals transformed a listless, depressed ward into one with something to think and talk about and look forward to with a certain amount of interest. Lack of space prevents more than a mere mention of the various possibilities of a live hospital library and librarian. May the time soon come when every private and most of the state hospitals will have librarians attached to the staff and those state hospitals which cannot afford the salary of the librarian will appeal to their state library commissions for help in selecting books and administering their libraries.

Parker Hill Hospital library from another angle. Easy chairs and cretonne hangings add to the cheerfulness and comfort of the room.

WISCONSIN NURSES REGISTER YEARLY

A new nursing education law in the state of Wisconsin requires the annual re-registration of nurses to make their practice legal. The Bureau of Nursing Education of the Wisconsin State Board of Health is making an effort to acquaint all graduate nurses in that state of the necessity of their re-registration.

The law specifically requires all who work as trained, graduate, certified or registered nurses in the state to hold a certificate from the State Board of Nurse Examiners. The attention of nurses, especially older graduates, is being called to the fact that if their certificates have never been recorded with the county clerk such recording must be done at once, as the holders are not considered registered until this part of the law has been complied with. Registrations expire each year.

THE GEOGRAPHICAL SECTIONS OF THE AMERICAN HOSPITAL ASSOCIATION*

By A. R. WARNER, M.D., Executive Secretary, American Hospital Association, Chicago

GEOGRAPHICAL sections of the American Hospital Association were proposed in the presidential address of Dr. Winford H. Smith in 1916 and written into the constitution later in this session. The purpose of this policy was then simply to reach more hospital workers with the advantages of live hospital conferences. The geographical limits were purposefully left indefinite that live conferences might be assured.

The Ohio Hospital Association, which had been in existence five years, became the first recognized geographical section in 1920. The resolution of the trustees of the American authorizing this plainly indicated that their idea of a geographical section at this time was not merely a means and medium for more conferences, but rather that such a section should be an integral part of the American Hospital Association organized and authorized to carry on its local work. Two-fifths of the dues of all active members in the state was appropriated for this purpose and to be expended as seemed best to the Ohio Section.

Since 1920, four other state associations have been recognized as geographical sections as has also the New England Hospital Association, which includes all of the New England states. Two other state associations have passed resolutions applying for recognition as sections and several states are organizing with this purpose. There is a general and active discussion of forming sections of three or four states each throughout the south.

The completion of the organization of the hospital field of the United States and probably Canada into recognized geographical sections now seems assured for the near future. This has made necessary careful thought as to the basic principles as well as the working details of such an organization. This paper will discuss two of these principles and some of the detail, all from the standpoint of a logical, complete organization of the hospital field.

First Principle:

The geographical sections are integral parts of the American Hospital Association which is thus subdivided to facilitate the handling of local problems and to simplify the assembling of the local hospital workers in conference.

The sections quite properly have full autonomy in every way within their territory. They can best determine the most helpful programs for their conferences; they can best handle all local questions and individual problems of the hospital workers. The sections quite properly receive and establish all personal memberships within their territory for the American Hospital Association as well as for the section. The fundamental object is common membership, common interests and concerted action. There can be no thought of dependence, competition or rivalry. The Ohio Hospital Association is the American Hospital Association in and for the state of Ohio.

The section and the section officers are entitled to every assistance the parent association can give, but the parent association always has been and must necessarily be guided and advised in local questions by its local members. Final decisions, therefore, always have and always must come right back to those who are now the section officers and members. It is best that they assume leadership from the first and ask any specific assistance from the home office or from other members that they desire.

In the matter of financial assistance, however, the Trustees of the American feel that two-fifths of the active membership dues is the limit of funds that can wisely be appropriated for any local work. The resolution reads as follows:

"There shall be paid and allowed by the American Hospital Association to such state association for every active member $2.00 per annum to defray the expenses of the state association as a section of the American Hospital Association."

It was hoped that the sections would keep this money in a special fund to be drawn upon as special needs arose, but the detail of this was left to the sections.

To Avoid Duplication

Second principle:

Duplication of effort should be avoided and specialization of effort attained.

The activities of the American and the sections necessarily overlap to a certain extent under the wisest management but in viewpoint and basis they are distinct. The emphasis in the American should be on matters of general interest and particularly directed to the accomplishment of progress in the field. This implies that the Association must be the effective factor in and practically the source of the crystallization and formulation of the ideas that count toward progressive development. The primary function of the sections seems to be the guiding of local conditions; that is, public opinion, legislation and medical cooperation and also the development of efficient personnel. This implies a helpfulness to individual workers which will make effective service in the hospital field impossible without a personal membership in the Association. Without doubt, the sections will always contribute to the crystallization of ideas underlying general progress and the American will be helpful to personal members, yet it is well that the primary differentiation of function be clearly understood.

It is physically impossible for all of the hospital personnel who could gain thereby to attend the round tables of the American and ask the questions that are perplexing them. But it is possible for all to attend and ask these questions at sectional round tables and the answers here will be more helpful and valuable, as the local and true conditions will be better understood. On the other hand, a section meeting can never be certain that it is hearing all the angles of the general problem.

It is well here to explain the purposes and the opportunities of Institutional Membership as it is based upon this differentiation of function.

The American hospital field is common to the United States and Canada and is not very much affected from the outside. The basic principles of organization and the general policies of operation of all hospitals are determined by those exercising the functions of trustees with the superintendent as the executive

*Read at the eighth annual session of the Ohio Hospital Association, Dayton, May 9-11.

officer of the trustees. In every case, the organic structure of the hospital is their interpretation of a consensus of the best policies in the field and represents a modern and ideal institution with perhaps some modifications made necessary by their particular circumstances. The basis for their decisions in general organization and policies is always the general field and only a message from the general field can influence them. A local viewpoint on general organization and policies practically always comes from a personal motive.

Through Institutional Membership, the American is reaching the trustees and influencing basic policies of hospitals with an increasing effectiveness. The boards of Institutional Members by official action recognize and thereby come to know of the American Hospital Association. The office of the Association, therefore, becomes the logical place to write for information concerning a question of policy or methods in general use. I would estimate that at present a full half of the correspondence, arising outside the office or routine, is now with trustees.

Many hospital trustees are engaged in lines of business which maintain trade associations to promote that field and the common welfare. They are, therefore, far more readily than the superintendents—accepting the American Hospital Association as the corresponding association of the hospital field. This gives every act, every decision, and every bit of information sent out by the Association a standing and a reception it could otherwise never get. It gives to the Association many opportunities it is properly seeking.

Of the value of thus reaching trustees with facts, figures, information as to general practices, and the consensus of opinions of the best in the field, there can be no question. The annual conference is sufficient to provide the office with an increasing volume of definite information and crystallized opinion, which can be scattered by mail throughout the year. It is quite impossible to assemble all or even the major part of the trustees into conventions or educate them to read hospital literature consistently, but they can be lead to ask for the information they desire concerning problems at hand and, if they get it the first time, they ask again. The Association is now effectively acting as a medium whereby the consensus of opinion of the best superintendents is available to and reaching many of the trustees of even the smaller hospitals.

This is a primary function of the American and cannot be done satisfactorily by sectional associations; therefore Institutional Membership must remain exclusively in the American. The American Hospital Association must continue to develop on lines parallel with such trade associations as are existing to develop their respective fields, and must be composed primarily of the individual active units of the field, which are the hospitals.

Personal membership in the American brings results worth while through extending and strengthening the contacts of the Association with the field and there never can be too many of these contacts. Personal membership through an organized geographical section clearly makes these contacts doubly useful—both to the members and the associations.

Personal memberships of trustees through the sections are also doubly effective and while the function of the trustee and his problems lead his interest more often into questions of general policy as to the whole field, there are local problems for every trustee to settle.

The conclusions to be drawn from this paper are:

(1) The proper and effective organization of the hospital field demands an active general association based primarily upon the units of the field which are the hospitals, acting as any trade association does to develop the field and aid the individual units to maintain sound policies; and also demands sections—both geographic and departmental—composed of the active personnel of the field to think out the problems of these varied sections and to develop standards.

(2) The complete organization of the American field along these lines should progress as rapidly as possible.

(3) There must be developed basic divisions of function and labor and a working harmony throughout such an association and the sections thereof.

NEW YORK NURSES PLAN SPECIAL TOUR TO A. N. A. CONVENTION

The Special Pacific Coast Tour to the American Nurse's Association Convention in Seattle, June 26-July 1, which has been arranged by the New York State Nurses' Association is said to be meeting with enthusiastic approval and support on the part of members of the New York State Association and of other eastern state associations.

The special train will leave New York on Monday, June 19 at 1 p. m. via the New York Central railroad, stopping enroute at Albany, Syracuse, Rochester, Buffalo, Toledo and Cleveland. Special cars have been provided to accommodate the delegations from New York, New Jersey, Connecticut, Massachusetts, Pennsylvania, Maryland and Ohio. Former graduates of New York hospitals living in many distant states have taken this opportunity to meet their friends from the Empire state.

A large delegation is now booked and the prospects for a delightful trip are assured. The train will take the party through the Canadian Rockies, with a stop at beautiful Banff and Lake Louise.

Accommodations have been provided at Seattle with headquarters at the Hotel Savoy.

After the convention, the special train will continue on to Portland and San Francisco. From there some of the party will visit Yosemite National Park and Los Angeles, and others will visit Yellowstone National Park. All will meet in Salt Lake City and continue homeward together through the Royal Gorge, with stops at Colorado Springs and Denver.

A fast train schedule has been provided so as to insure to the party the maximum of sightseeing and rest with the minimum amount of railroad travel possible.

Arrangements can be made to stay in the West for a longer period than that provided for in the tour, if desired. The tour has been kept within the usual thirty-day vacation period, and the cost of the trip has been kept at a minimum to enable as many as possible to attend the convention.

In booking with this trip there will be no need to worry about reservations at hotels at Seattle or elsewhere, transfers of baggage, or any of the minor details of travelling as everything has been arranged in advance and the party will be in charge of experienced conductors, assisted by the transportation committees of the state delegations travelling on the train. Every endeavor will be made to see to it that all plans are carried out to the satisfaction of the members.

For information concerning the tour nurses are asked to address Mrs. Julia W. Kline, R. N., chairman of transportation, New York State Nurses Association, 546 Rugby Road, Brooklyn, N. Y., or the Worldwide Travel Service, Inc., 103 Park Avenue, New York City, N. Y.

NEW FORM OF MEDICAL SERVICE FOR VASSAR BROTHERS HOSPITAL

By GEORGE LANE, Chairman, Special Committee of the Board of Trustees. Vassar Brothers Hospital, Poughkeepsie, N. Y.

VASSAR Brothers Hospital, located at Poughkeepsie, N. Y., and having a present capacity of ninety beds, was founded in 1887 by money donated by the Vassar brothers.

When first opened it took over the staff of St. Barnabas (a small city hospital) which included most of the doctors then prominent in Poughkeepsie.

Later a change was made to a paid medical staff and the so-called "closed" policy. This system has produced good results medically, and it has been possible to maintain very high standards through the liberal endowment of about one and a quarter million dollars left by the founders.

There are, however, many able doctors in this community who desire opportunities which a hospital alone can supply for the care and treatment of their patients, and to whom exclusion from these privileges is a hardship. With the passing years the greatly increased use of the hospital and its enlarged field of activities have taxed its physical capacity to the utmost, rendering it quite impossible to meet any further demands without enlargement.

Citizens Favor Open Staff

The trustees have recently deemed it prudent to obtain the opinion of residents of this community as to the necessity for an enlarged hospital. The sentiment seemed to be overwhelmingly in favor of a larger institution open to the use of all qualified physicians, and it was indicated that responsible citizens generally would be glad to support an open hospital.

To meet this situation the board of trustees has undertaken the erection of a new pavilion, administrative, laboratory and operating sections (in all doubling the size of the present institution), and an entire reorganization of the medical service.

In the execution of all these plans, competent advice has been sought in the person of Mr. Henry C. Wright, hospital consultant, of New York City. He and the trustees agree in the belief that the value of excellent scientific work can scarcely be overestimated. The facilities in the laboratories and x-ray departments are, therefore, to be much more than proportionately increased, so that the new Vassar Brothers Hospital will in this respect surpass many larger institutions.

Also, with Mr. Wright's cooperation, a somewhat unique staff organization has been effected, to become operative upon completion of the necessary buildings, and the new form may be of interest to the readers of THE MODERN HOSPITAL.

There is a medical staff for the care of charity cases, to be known as the medical board, or individually as attendings. Another staff termed the auxiliary staff (usually called courtesy staff), membership open to all medical practitioners in Poughkeepsie and vicinity who are in good standing in the profession. Those on this staff will have the privilege of private rooms and facilities necessary for giving their patients surgical and medical care.

Nominations for membership on the staff, and other recommendations, will be considered by a committee composed of two members of the board of trustees, a senior in the surgical division, a senior in the medical division, and the superintendent before being submitted to the board of trustees for its approval.

The new organization also includes a medical and a surgical supervisor, whose functions as related to the attendings are to see that the medical standards set by the hospital are lived up to, and that case histories are properly made out. They also exercise supervision over the interns in regard to their professional service, but they do not have any direct power over members of the medical board such as chiefs of service usually have. If an attending on service is not meeting the standards of the hospital in some respect, the function of the supervisor is to suggest a modification in practice; if the suggestion, repeated, does not correct the difficulty, then the matter will be taken up with the medical board; if a correction is not secured by that method, it will subsequently be taken by the supervisor to the board of trustees. Thus, the supervisors, although without power to direct or order any attending on service, by the fact that they represent the medical board and the trustees, do exercise by suggestion and supervision, very marked influence; an influence that probably will produce as desirable results as the power that is usually conferred upon chiefs. The supervisors also act as attendings on service for three months each.

Over the auxiliary staff, however, the medical and surgical supervisors do have power. The surgical supervisor may refuse to let an auxiliary surgeon operate if he believes he is not competent to perform the particular operation contemplated; or he may require that he perform his operation under supervision. He is responsible for the members of the auxiliary staff making out case histories in accordance with the standards of the hospital and fulfilling all other requirements of good practice.

In other words, over the members of the auxiliary staff the supervisors have power. They exercise influence and suggestion in connection with members of the medical board.

The membership of the board has been selected and appointed, ready for service when the new building is opened, so that the transition from the present form of closed staff to the open staff has been made without friction, and with general approval on the part of the medical profession in Poughkeepsie.

From the standpoint of trustees, we welcome this system of medical and surgical supervisors. Heretofore we have felt that we were fairly in touch with the business side of the hospital through the superintendent, but have not found it easy for the superintendent to inform himself with regard to what is taking place in connection with the medical and surgical care of patients. By this system, the superintendent will be intimately informed by the supervisors of the surgical and medical divisions, so that he may be better advised in communicating to the trustees regarding the activities of the institution.

Mr. Fowler, who has been superintendent for the past

eleven years, has been very successful in creating and maintaining the fine spirit which now exists in the hospital, and in fostering the public esteem in which the hospital is held.

Owing to his diminishing vigor and according to expectation upon taking the office, he resigned last July.

The trustees after searching for a new incumbent were finally so fortunate as to secure the services of Mr. Alexander H. Candlish, who has for a number of years been superintendent of the Post Graduate Hospital of New York City. We feel confident that Mr. Candlish with his broad experience and ability will be able to make the reorganized and enlarged Vassar Brothers Hospital one of the best in the country.

NATIONAL HOSPITAL DAY IS WIDELY OBSERVED

GAINING impetus from last year's widespread observance of the birth of Florence Nightingale, National Hospital Day was celebrated extensively throughout the United States and Canada and even in several foreign countries on May 12.

Endorsed by President Harding, governors of various states, lieutenant governors of provinces and mayors of cities, the day was given over to introducing the hospital, its facilities, its ideals and its needs to the public. Many unique observances of the occasion were made in addition to the regular "open house" maintained by a large percentage of the hospitals of this continent.

In New York the day gave a fitting opportunity for the mailing by the United Hospital Fund of checks totalling $525,000 to fifty-seven hospitals of the city. The amount sent to the various hospitals were based upon the number of days of free hospital treatment given by each institution during the year, combined with the cost per day of ward patients. The distribution of the $525,000 fund was as follows:

GENERAL HOSPITALS.

Mt. Sinai	$34,017.18	Lebanon	$8,861.68
St. Luke's	30,919.91	Flower	7,493.85
New York	22,673.84	St. Mark's	8,109.05
Presbyterian	19,548.82	French	5,227.81
Lenox Hill	16,683.07	Hahnemann	4,878.98
Post Graduate	14,985.38	Volunteer	4,008.64
Lincoln	12,965.83	Community	3,526.24
Roosevelt	12,208.29	Broad Street	3,241.68
Beth Israel	10,167.18	Knickerbocker	2,953.64
		Total	$222,471.07

WOMEN AND CHILDREN.

Lying-In	$17,496.50	Babies'	$6,985.90
Sloane	16,981.96	Infirmary for Women and Children	4,494.53
Woman's	11,514.11	Man. Maternity	3,542.63
St. Mary's Free	10,918.40	Jewish Maternity	3,520.70
Nursery and Childs	10,688.30	Total	$93,347.54
Misericordia	7,204.51		

SPECIAL HOSPITALS.

Orthopedic	$21,484.61	Man. Eye, Ear, Throat	$6,409.80
Ruptured and Crippled	9,278.26	Ophthalmic	1,357.38
Hos. for Joint Diseases	5,372.61	Knapp Memorial	1,351.57
Reconstruction	1,614.45	Skin and Cancer	6,038.52
Memorial	4,558.80	Neurological	2,162.67
N. Y. Eye and Ear Infirmary	7,309.17	Total	$66,937.84

CHRONIC, CONVALESCENTS.

Montefiore	$37,295.31	Isabella Home	$4,328.31
Home for Incurables	8,848.26	St. Andrew's Convalescent	1,088.43
House of Rest	7,417.97	Total	$64,468.07
House, Holy Comforter.	5,489.79		

BROOKLYN HOSPITALS.

Long Island College	$17,842.61	Wyckoff Heights	$5,322.66
Brooklyn	9,542.31	House of St. Giles the Cripple	4,938.86
Jewish	8,194.61	Prospect Heights	3,157.67
Methodist Episcopal	10,722.37	St. John's	2,758.51
Norwegian	7,000.22	Williamsburg	2,669.08
St. Christopher's	5,626.58	Total	$77,775.48
		Grand total	$525,000.00

In Chicago the ninety-two hospitals of the city individually observed the day with open house, programs and various forms of novel and instructive entertainment for the visitors. At Presbyterian Hospital the women's auxiliary gave a children's party and served refreshments to all visitors; at Wesley Memorial there were open house, moving pictures and an evening entertainment; Cook County and the Illinois Training School for Nurses enlisted the support of women of the community in an inspection tour of the hospital and the school with a view to interesting young women in the nursing profession; Mercy Hospital held a reception under the auspices of the wives of the medical staff; St. Bernard's held open house and in the evening presented a program at the Englewood Clubhouse together with a dance for the nurses; Hahnemann Hospital had a tea and reception in the afternoon. Other hospitals of the city entertained similarly. The allied florists donated truckloads of flowers which were distributed by the American Legion in the county hospital.

Many hospitals in various parts of the country made the day usher in a contemplated drive for funds. The Brunswick Hospital of Brooklyn inaugurated its $100,000 campaign for funds for a new educational building and nurses' residence. The Ladies' Auxiliary of Corry Hospital at Corry, Pennsylvania, conducted a tag day for the benefit of the institution. The Samaritan Hospital in Philadelphia, which has been conducting a $225,000 financial campaign, concentrated its efforts on May 12.

At Walla Walla, Wash., the renovated government hospital which is to serve the former service men of the Northwest, was officially opened.

Baby shows were held at many institutions, open to all infants born in the hospital during the past two years. The Mary Immaculate Hospital of Jamaica, N. Y., in addition to holding open house and conducting a baby show, conceived the idea of addressing a letter to merchants of Queens County asking them to place enclosed cards in their windows, together with articles of equipment and supplies for the hospital, so that citizens who might wish to aid the institution could select a gift and send it to the hospital.

A number of institutions held graduating exercises for nurses on that day. Among them were the Baptist Hospital, Memphis, Tenn.; the Miami Valley Hospital at Dayton, Ohio; and St. Mary's Hospital in Duluth, Minn.

Eight hundred babies born in the Decatur and Macon County Hospital at Decatur, Ill., were present at exercises celebrating the day. The main event of the gay lawn party to which they and their parents were invited was the dedication of a flag staff. The first child born in the institution assisted in the flag-raising.

Business houses in Saskatoon, Saskatchewan, were gayly decorated as an expression of the public interest in hospitals and hospital day. Hundreds of citizens visited the various hospitals of the city during the appointed hours. British Columbia, Ontario, Alberta, New Brunswick and other Canadian hospitals found some way of bringing their institutions to the public's attention. Stratford Hospital was benefitted by the sale of roses conducted by its women's auxiliary.

NURSING AND THE HOSPITAL

Conducted by CAROLYN E. GRAY, R.N.,
Department of Nursing Education, College for Women,
Western Reserve University, Cleveland, Ohio

PROFESSIONAL STANDING ORDERS FOR HOSPITALS

By HORACE MARSHALL KORNS, M.D., Assistant Visiting Physician, Lakeside Hospital, Cleveland, Ohio

EVERY hospital organization, if it is to attain a maximum degree of efficiency, must observe certain regularly appointed methods of executing its business details. The departments of administration, of records, of housekeeping, etc., cannot function properly except in accordance with some adequate and well-understood plan. This proposition applies, of course, to any business, and is as old as government.

It is all the more remarkable, therefore, that some modification of this principle has not had wider application to the routine details of modern clinical work as it is carried on in the average hospital. It is difficult to overemphasize the importance of the part played by a carefully detailed list of professional standing orders in the maintenance of a smooth ward routine. If one has studied the mass of intricate detail involved in the seemingly simple procedures of admitting a patient to the ward, administering medicines, taking temperatures, collecting specimens for examination, preparing patients for operation, observing proper precautions against the spread of infection, etc., ad infinitum, and if one has come in contact with the various persons and kinds of persons often busy, sometimes careless and inattentive, upon whom depends the proper execution of the details of these multiplied procedures, he should be very firmly convinced not only of the advisability but of the absolute necessity for some carefully standardized way of doing things. Indeed, in addressing those familiar with hospital requirements, it would seem trite to advance arguments in support of such a proposition. Yet many large hospitals have not developed any such standard of routine procedure.

It should be emphasized that efficient methods of performing the routine duties are developed, not made. The best way of doing things is not, as a rule, immediately dictated, but evolves slowly through years of experience.

Need of Standing Orders

Any hospital, large or small, if it has an organized professional staff, can have its professional standing orders. The need is urgent in the small hospital, especially if there is no resident house officer in constant attendance. In the large general hospital, with its many professional services including in their essential nature no less than in their divisional chiefs certain characteristic idiosyncrasies, its diversified clinical activities and public responsibilities, and its constantly changing personnel, the need is even as great, perhaps greater, for the same reason and for additional reasons.

Standing orders may exist in two forms. Each service may maintain a separate list, or all services may combine their general orders, each reserving to itself certain provisions which are not susceptible of general application. Of the two plans, the second is to be preferred in nearly all instances.

The experience of The Lakeside Hospital will serve as an illustration. For many years each of the four major clinical services—surgical, medical, gynecological and pediatric—maintained a separate list of professional standing orders. This plan worked very well until the policy of individual service interns was abandoned in favor of the rotating intern service. Its deficiences, although previously existent, were thereby made more apparent, and the entire question was reopened.

Separate Service Orders Confusing

The more important defects of the "separate list" plan are as follows:

(1) Unless all patients admitted to the hospital are correctly diagnosed prior to admission, or unless all patients are first admitted to the general medical service and there correctly diagnosed, neither of which is possible, each division must perform the two-fold function of the general medical and the special service. Even if one of these conditions were possible, or if the hospital maintained a special admitting division, nevertheless each special service must be medical as well as special. The inevitable duality of the non-medical service is exemplified, in the extreme instance, by the typhoid fever patient who is under surgical care following operation for perforation of an intestinal ulcer. Many less striking examples are of everyday occurrence. It is quite apparent, therefore, that the professional orders of each service must include a complete medical list in addition to its own. It follows that either there are in existence in the same hospital four distinct sets of regulations governing the same procedures, or that the non-medical services have copied, possibly without attempt at criticism, all or part of the orders of the general medical service. The result is redundant and very confusing.

(2) Similarly, many surgical details are common to all divisions of surgery. Separate lists provide needless repetition and contradiction.

(3) The intern whose hospital term is divided among several services is greatly handicapped by the necessity of learning a complete new set of standing orders every time he changes from one division to another. His reac-

tion to this cannot fail to be unfavorable, and his chances of making serious mistakes are greatly improved.

(4) The criticism from the standpoint of the intern applies equally well from that of the pupil nurse, whose duties ultimately take her into contact with all services.[1]

(5) The "separate list" plan suggests to the casual observer that there is disunity among the professional services. Either they have not learned to appreciate the advantages of unified orders or they are unable to meet upon any common ground.

In view of these considerations it was decided to undertake the preparation of a list of general orders for all services. Careful inquiry soon discovered a large number of places where all services might conveniently combine their regulations. The amount of material to be reserved for any one service became surprisingly small.

The professional standing orders of The Lakeside Hospital[2] are divided into two main parts—general, and special. The first comprises regulations which apply equally to all services, constituting over fifty per cent of the entire list. The second is subdivided to satisfy the peculiar requirements of the separate services. All the orders of the general medical service are included in the first division. This service needs no special orders of its own and its requirements are equally the requirements of the entire hospital. This is to be expected and should have wide application. The experience of the year during which the new plan has been in use has amply demonstrated its superiority.

The material is presented in book form. A complete table of contents facilitates quick reference. All right-hand pages are printed, all left-hand pages are blank, and all paragraphs are numbered, thus allowing changes and additions to be made with ease. All nurses and house physicians are provided with personal copies, and each ward with "official copies," the latter being certified by the superintendent of the hospital. Amendments and revisions are made in all official copies simultaneously. Personal copies may be kept up to date by reference to the official ward copies.

In addition to the standing orders, it has been found convenient to include at the end of the book the hospital forms to be followed by interns in writing their clinical histories and physical examinations.

1. This paper does not concern itself with more than passing mention of the relation of the nurse to professional standing orders.
2. Copies of these standing orders may be obtained from the cashier, Lakeside Hospital, Cleveland, Ohio.

THE RELATION OF THE NURSE TO PROFESSIONAL STANDING ORDERS

By JUNE A. RAMSEY, Assistant Principal, Lakeside School of Nursing, Cleveland, Ohio.

THE Book of Standing Orders for all Professional Services as compiled by Dr. Korns for The Lakeside Hospital has become a necessary factor in the more efficient management of ward and hospital routine, a fact amply demonstrated in the last year and a half of its use in the hospital.

It is especially valuable to the head nurse and to the young student nurse just entering upon her ward duties, and is of equal value to the strange private or general duty nurse coming into the hospital for the first time.

Instead of a number of loose, typewritten sheets, clipped together and representing the more or less conflicting orders of all the services on the ward, (sometimes as many as four or six) it is in book form and the subject matter is so arranged that there is little or no duplication of orders. The sequence is such that the general medical orders come first and include certain regulations, such as those regarding admission of patients, temperature, baths and so on, which are common to all services. These are followed by the special orders peculiar to each service.

Thus the student nurse entering upon ward duties learns at the very beginning a few fundamentals which apply to all services, whether medical, surgical, gynecological or pediatric, and later needs to acquire only the comparatively few new rules pertaining to the new service in which she may be placed.

Book Is Great Time Saver

To the busy head nurse whose time is so occupied with the routine of administration and her manifold teaching duties, it is a means of saving an endless amount of time, otherwise spent in constant repetition of necessary orders. It is an efficient means of presenting the standing orders of all services in as condensed a form as possible, it is readily accessible, there are no loose sheets to be lost or mislaid, and because of the blank left-hand page is easily kept up to date and so insures uniformity throughout the hospital. Furthermore, in cases of doubt or dispute it serves as a court of appeal.

In order to insure the highest possible efficiency, there must be perfect cooperation of all professional services with the administration and the nursing staff. If any change is to be made in the Standing Orders as originally standardized, and changes do occur and not infrequently, they should be made by the resident of the service, approved by the administrative and nursing departments, and a copy of such order, duly approved and signed, issued simultaneously to all departments concerned.

Unless this procedure is carried out in every detail, the Professional Standing Orders no longer serve the purpose for which they were originally intended, but become instead a chaotic mass of as many conflicting orders as there have been interns, and consequently a dead letter.

The following extract will serve to demonstrate its efficiency in one detail, that of orders regarding precaution cases. The doctor simply writes in the order book "influenza" or "typhoid fever precautions," as the case may be. The head nurse by referring to the list of precautions and key, sees to it that the proper orders are carried out.

In wards in which there are many kinds of precaution cases, it is a good idea to have the list of precautions, with the key, posted side by side in a convenient place in the utility room for the use of all concerned in the care of these patients.

Before the Book of Standing Orders for all Professional Services was distributed, Dr. Korns held a number of conferences with the entire nursing staff, including student as well as graduate nurses. Every point was considered carefully and in detail, questions answered and

Diseases	Sections									
	1	2	3	4	5	6	7	8	9	10
The acute exanthemata	X		X	X		X	X			X
Meningitis: Meningococcus, pneumococcus, tuberculosis	X	X	X	X		X	X			X
Acute infectious polioencephalomyelitis	X	X	X	X		X	X			X
Encephalitis lethargica	X	X	X	X		X	X			X
Throat infections: Diphtheria, Vincent's angina, streptococcus, tonsilitis	X	X	X	X		X	X			X
Enteritis: Follicular, bacillary, amebic, tuberculous	X		X	X	X	X	X	X	X	X
Tuberculosis: pulmonary				X		X	X			X
Tuberculosis: urinary tract				X		X	X			X
Syphilis	X		X	X	X	X	X	X		X
Gonorrhea	X		X	X	X	X	X	X		X
Streptococcus infections, including erysipelas, excluding throat	X		X	X	X	X	X			X
Rabies	X		X	X			X			X
Infectious pyelitis and cystitis	X		X	X		X	X	X		X
Bronchitis	X		X	X			X			X
Pneumonia	X		X	X			X			X
Typhoid fever	X		X	X		X	X	X	X	X
Intestinal parasites							X	X		
Pertussis	X	X	X	X		X	X			X
Epidemic parotitis	X		X	X		X	X			X
Parasitic skin diseases	X		X	X						X
All patients, upon admission	X		X	X		X	X			X
All patients developing a rash, cough, rhinitis, pharyngitis, laryngitis	X	X	X	X		X	X			X
All patients developing a fever of 38 or above, previously normal	X		X	X		X	X			X

doubts clarified. A copy was then issued to each ward as an official copy, and one to each graduate and student nurse for her own personal use. Because they are so constantly referred to, they have come to assume the aspect of a textbook and one which no nurse would cheerfully relinquish.

List of Precautions Posted

1. Patient's bed to be placarded with a red card, marked "Isolated." Complete isolation:
   (a) In a separate room, or
   (b) By screens placed about the upper two-thirds of the bed, preferably about the entire bed, or
   (c) By removal of the bed to such a position that its center stands at least 10 feet from the center of any adjacent bed.
2. Masks must be worn by all examiners, attendants, and visitors while in the patient's room or in contact with him.
3. Gowns must be worn by examiners and attendants while in routine contact with the patient or his bed. This does not mean that a gown must be worn while palpating a pulse or fontanelle, administering a hypodermic, taking a temperature, etc., but in the performance of these acts one must be very careful not to touch the bed or the patient except with the hands, and the hands must be washed before touching any other patient or object.
   There must be a separate set of gowns for each patient. Gowns must be changed before going from one patient to another. Before removal of a gown the hands must be scrubbed thoroughly with soap, water and brush. Gowns are to be hung with the clean side out. After removal of a gown the hands are again to be washed carefully, finishing the operation with alcohol.
4. All examiners and attendants must scrub their hands thoroughly with soap, water and brush after each contact with the patient or his bed.
5. Gloves are to be worn by nurses during any contact with the patient. This applies to general and special nursing attention, e. g., morning and evening care, feeding, bathing, giving enemas, taking temperatures, etc. It does not apply to lesser details such as palpation of a pulse, administration of a hypodermic, etc.
6. There shall be set aside for the exclusive use of each patient a bedpan, urinal, enema tip and rectal tube. After use, in each instance, bedpans and urinals, with contents, must be sterilized in the ward sterilizer for thirty minutes. Masses of fecal matter are to be broken up before sterilization. Enema tips and rectal tubes are to be boiled for ten minutes.
7. There shall be set aside for the exclusive use of each patient dishes, glassware, water pitcher, sputum cup and any other articles which may be required in his routine care. This provision excludes feeding bottles and the dishes necessary to serve meals. All sputum cups, with contents, must be sterilized in the ward sterilizer for thirty minutes. Gauze used for collecting sputum must be put in the gauze pail. Non-exclusive dishes must be boiled for 10 minutes after each contact with the patient. Exclusive utensils must be similarly boiled before being used for any other purpose. All instruments and utensils, except knives must be boiled for ten minutes after each contact, direct or indirect, with the patient. Knives may be sterilized with phenol and alcohol.
8. Personal and bed linen, including diapers, gowns, sheets, etc., which becomes soiled by fecal material, must, in company with the entire amount of fecal material, be left for six hours in a 10% solution of formalin, then placed in a special rubber bag "for infected materials," before being sent to the laundry.
9. Mosquito netting must be kept over the patient at all times.
10. Patients shall receive all care and treatments in bed and shall not be taken elsewhere for any purpose whatever, except upon special order, as for clinic purposes, etc.

The above sections are to be followed in the diseases mentioned.

"Our hope, our only hope, lies in people who make their own rules, the rules of social harmony and love, because they have learned to love and live for the common good."—Dewey.

ALUMNAE IN UNIFORM ATTEND NURSES' COMMENCEMENT

In one of our well known schools of nursing it is customary for as many as possible of the alumnae members to attend the commencement exercises in the school uniform. This school has graduated twenty-eight classes and usually each class is represented. The graduating class and the students in the school plus the alumnae members occupy seats on both sides of the middle aisle of the church in which the exercises are held. This means that half, sometimes three-quarters, of the body of the church is filled with nurses in blue and white uniforms.

When viewed from the gallery this long line of nurses walking up the main aisle and filing into the pews makes a distinctly impressive scene. Always the address to the graduating class includes a message of inspiration for the alumnae members and in every way possible they are made to feel welcome and honored guests. It is pleasant to think that the marked loyalty of these graduates to their school is a response to a friendly attitude, of which their inclusion in what is the most eventful day of the year is only one expression.

COMMENCEMENT WEEK FOR NURSES AT VANCOUVER GENERAL

One of the leading June events in Vancouver, B. C. Hospital will be the graduation exercises in connection with the training school of nurses at Vancouver General Hospital, when fifty-six nurses will receive their diplomas and medals. During recent years this interesting event has extended over an entire week, known as Commencement Week. The hospital features this event with great interest and importance.

The week commences with baccalaureate services in one of the churches, especially for the nurses. On Monday night is the class dance. On Wednesday afternoon the class picnic takes place usually up the Fraser River to a suitable summer resort. Here various events are arranged, including the reading of the class prophecy. On Thursday an afternoon tea is given in the graduates' honor and on Friday night the graduation exercises take place in the university auditorium. This latter event is splendidly arranged and of public interest.

Life is the gift of God and is divine.—Longfellow.

DIETETICS AND INSTITUTIONAL FOOD SERVICE

Conducted by LULU G. GRAVES,
Supervising Dietitian, Mt. Sinai Hospital, New York.

FINANCIAL REWARDS OF DIETITIANS

By J. J. WEBER, Managing Editor, The Modern Hospital, Chicago.

"WHY is a dietitian?" was a fair question no longer than a decade ago. An erudite person back in 1912 might have put such a query and have felt no shame. The function-in-chief of this newly evolved profession was obvious from its title, but its necessity, its value and its possibilities were scarcely recognized by the laity. Nowadays a school child knows the "why" of a dietitian, thus firmly has she established herself in this brief period.

A better question for enlightened 1922 concerns the "how much" of a dietitian. How much is this person of highly specialized training and of duties rapidly broadening in scope from hospital to home worth to the community in dollars and cents? Her worth is difficult to estimate; it is more than considerable. What she actually gets for such service is more easily determined; that is the subject of this paper.

Method of Securing Data

To obtain information of authenticity on dietitians' salaries, The Modern Hospital in the summer of 1921 sent out questionnaires to two groups of hospitals. The hospitals were asked to report the present salaries of their dietitians, the estimated monetary value of living expenses furnished by the institution, and the date and amount of their latest salary increase.

Group I consisted of 500 hospitals of less than 100 beds selected from all sections of the United States on the basis of population. The number of hospitals questioned in each state was dependent upon the ratio that the population of the state bore to the total population of the United States based on the federal census of 1910. Replies were received from 22 per cent of this number.

The American College of Surgeon's 1920 list of approved hospitals was the basis on which hospitals were selected in Group II. Questionnaires were in this instance sent to 285 non-Catholic hospitals of the United States and Canada. Forty per cent, or 116 hospitals, of this group responded. On the data thus gathered the findings of this paper are based.

Average Salary Is $1,204

The financial reward of the average hospital dietitian is $1,204.37½ per year plus quarters and subsistence. She is usually provided by the institution with more than comfortable quarters and she herself exerts such large direction of the food that she can scarcely bring complaint against it.

One dietitian in a 1,600 bed hospital receive $2,750 a year and living expenses estimated at $1,200. She stands at the top of the salary list as compiled and she has very few colleagues in the country who can exceed or closely approximate this amount. At the low level of salaries is $720 a year. This is a common minimum among institutions up to 300 beds.

Among the smaller hospitals, less than 100 beds, only one dietitian receives $1,500. Of the entire group of large institutions only 17½ per cent receive $1,500 or more. So it may be seen that there is noticeably slight differences in the financial rewards of the work.

The salary survey indicates how rapidly the dietitian has made herself indispensable in the hospital field. Among small institutions of less than 50 beds she has created a large place. More than half of the hospitals in this group (54 per cent) have trained dietitians on their staff. The same figures hold for hospitals of from 50 to 74 beds. Seventy-one per cent of all the institutions listed of from 75 to 99 beds have dietitians, and when the 100 to 199 bed group is reached it is found that 85 per cent of them have provisions for full time dietetic work. These percentages steadily mount until hospitals of 200 to 299 beds show 88 per cent; those institutions of more than 300 beds are "100 per cent dietitionized."

Increases Are General

Room, board and laundry are not provided hospital deititians in every instance. Some report only luncheons received at the hospitals. Several receive meals but not living quarters. A number are not provided free laundry service. But 90 per cent of them are allowed full maintenance, the value of which they estimate all the way from $300 to $1,800.

Fairly substantial salary increases are reported as having been received within the last two years by 75 per cent of the dietitians listed. They range from $100 to $500, the average increase being approximately $200.

Following are the figures on which the above conclusions are based:

Detailed Information Regarding Salaries Paid Dietitians of 112 Hospitals Having Less Than 100 Beds

Range of Bed Capacity of 112 Hospitals.—20 to 97 Beds

1 to 49 Bed Group

Six hospitals, or 5 per cent, of 112 hospitals under consideraton.

Average salary of dietitian.....$ 873

Maximum salary 1,020
Minimum salary 720
Salaries above average.....4
Salaries below average.....2

50 to 74 Bed Group

Thirty-nine hospitals, or 35 per cent, of 112 hospitals under consideration.
Average salary of dietitian.....$1,020
Maximum salary 1,200
Minimum salary 720
Salaries above average.....19
Salaries on the average.....3
Salaries below average.....17

75 to 99 Bed Group

Twenty-five hospitals, or 22 per cent, of 112 hospitals under consideration.
Average salary of dietitian $1,098
Maximum salary 1,500
Minimum salary 780
Salaries above average 11
Salaries below average 14

Detailed Information Regarding Salaries Paid Dietitions of 116 Hospitals Having 100 or More Beds

Range of Bed Capacity of 116 Hospitals—100 to 2,700 Beds

100 to 199 Bed Group

Forty-six hospitals, or 40 per cent, of 116 hospitals under consideration.
Average salary of dietitian.....$1,135
Maximum salary 1,500
Minimum salary 720
Salaries above average 30
Salaries average 1
Salaries below average 15

200 to 299 Bed Group

Twenty-nine, or 25 per cent, of 116 hospitals under consideration.
Average salary of dietitian $1,372
Maximum salary 2,400
Minimum salary 780
Salaries above average 13
Salaries below average 16

300 to 399 Bed Group

Six hospitals, or 5 per cent, of 116 hospitals under consideration.
Average salary of dietitian $1,216
Maximum salary 1,560
Minimum salary 900
Salaries above average 3
Salaries below average 3

400 to 499 Bed Group

Twelve hospitals, or 10 per cent of 116 hospitals under consideration.
Average salary of dietitian $1,418
Maximum salary 1,800
Minimum salary 1,000
Salaries above average 7
Salaries below average 5

500 Bed Group and Over

Fifteen hospitals, or 13 per cent, of 116 hospitals under consideration.
Average salary of dietitian $1,483
Maximum salary 2,750
Minimum salary 1,145
Salaries above average 6
Salaries below average 9

Salaries of Dietitians in Hospitals Having Less Than 100 Beds

No. of Beds	Monetary Salary	Monetary Equivalent	No. of Beds	Monetary Salary	Monetary Equivalent
		1 to 49 Bed Group.			
20	$ 900	$360	35	900	...
30	780	480	40	920	480
33	1,020	360	45	720	900
		50 to 74 Bed Group.			
50	$ 720	$ 540	60	900	480
50	900	...	65	960	...
50	...	1,020	65	1,020	416
50	1,080	...	65	900	...
50	900	...	65	960	365
50	1,200	500	65	1,200	400
52	1,080	...	65	1,080	1,040
53	900	720	65	900	600
54	1,200	300	66	1,200	600
57	1,080	480	68	1,080	480
60	1,140	384	70	1,200	300
60	1,200	720	70	960	250
60	1,200	780	70	840	...
60	1,200	600	70	1,080	600
60	900	500	70	900	300
60	1,020	600	70	780	540
60	1,080	...	72	1,020	400
60	1,200	480			
		75 to 99 Bed Group.			
75	$1,080	$ 360	85	1,080	720
75	1,200	480	85	960	400
75	900	...	86	1,500	720
75	780	300	87	1,320	...
75	1,200	...	87	1,500	600
75	1,140	600	88	1,080	600
75	840	...	90	1,080	480
75	900	365	90	900	600
75	1,080	600	90	1,200	500
80	1,200	...	90	1,200	480
80	960	...			

Salaries of Dietitians in Hospitals Having 100 or More Beds

		100 to 199 Bed Group.			
100	$1,080	$ 720	142	1,500	...
100	1,020	...	145	1,200	480
100	1,200	480	145	1,320	R and B
100	900	600	150	1,200	600
115	1,020	600	150	1,200	900
120	1,200	...	150	900	R, B and L
125	1,200	600	150	1,500	...
150	1,020	...	150	1,200	1,200
100	900	Full mainten.	150	600	(*)
100	1,020	...	150	1,200	1,000
100	1,200	600	150	1,200	720
100	720	360	150	1,500	R and bath
100	1,500	600	150	1,200	360
101	1,500	600	150	1,500	400
101	900	420	150	1,200	660
110	(*)	...	150	960	700
117	1,200	720	155	1,440	750
120	300	480	160	1,200	B, R and L
125	990	673.75	160	860	416
125	1,200	480	160	1,200	500
125	1,020	540	170	900	...
125	1,200	600	170	1,200	480
135	1,440	...	174	1,200	420
137	1,200	750	175	Deaconess	550
140	1,080	800	180	1,200	B, R and L
140	1,140	480	180	940	...
140	1,332	666	185	1,200	600
		200 to 299 Bed Group.			
200	$ 840	B, R and L	255	1,400	Maintenance
200	1,200	1,000	250	1,200	600
200	1,800	750	250	1,800	600
200	840	365	250	1,080	600
200	1,200	480	256	960	600
200	1,200	675	260	1,440	600
200	1,200	...	267	1,500	550
210	1,092	50%	270	1,140	1,000
215	1,080	1,600	273	1,500	900
225	1,800	600	275	1,020	Full maint.
225	1,500	550	285	1,500	Maintenance
236	1,440	1,260	289	1,800	500
240	1,500	R and B	291	1,200	B, R and L
250	1,080	Maintenance	295	1,800	Full maint.
		300 to 399 Bed Group.			
300	$1,560	Meals $360	360	1,440	300
320	1,320	B, R and L	360	1,000	400
350	1,080	900			
		400 to 499 Bed Group.			
400	$ 900	...	471	1,000	334
404	1,560	$600	475	1,800	500
446	1,500	400	476	1,200	Full maint.
450	1,500	720	480	1,200	500
450	1,500	800	485	1,320	Full maint.
450	1,800	780	491	1,500	700
450	1,200	...			
		500 Bed Group and Over.			
500	$1,500	Full maint.	1209	$1,332	$600
625	1,800	900	1202	1,200	800
700	1,500	600	1550	(*)	...
770	1,200	...	*Sisters of Charity.		
850	1,200	500	1600	2,750	1,200
850	1,500	900	1837	1,465	...
900	1,800	780	1900	1,200	900
1110	1,465	732.50	1700	1,145	500

*Rate $3.00 per hour.

DIETETICS FROM THE MEDICAL POINT OF VIEW

By A. D. WICKETT, M.D., Associate Professor of Internal Medicine, University of Michigan Medical School, Ann Arbor, Mich.

THE rational use of dietetics in the practice of medicine is dependent upon an understanding of certain biochemical fundamental facts.

Food materials may be classified as proteins, fats, carbohydrates, minerals, vitamines and water.

The importance of water is attested by the fact that nearly two-thirds of the weight of man is water.

Vitamines are necessary for growth and for the prevention of the so-called deficiency diseases, such as pellagra, scurvy and beriberi. The manner of their action is unknown but the necessity of their presence in the diet of man has been clearly demonstrated.

The function of the nutrient constituents is two-fold: first, to build up or repair tissues; second, to furnish energy either as heat or muscular work.

Protein foods are essentially tissue builders, but in the absence of a sufficient amount of carbohydrate and fat may serve as a source of energy. If carbohydrates or fats are taken in excess, they may be deposited in the form of fat as a future source of energy. Since neither carbohydrate nor fat can serve as a tissue builder, a certain amount of protein must be furnished in the diet each day. Experiments have established the minimum requirement for adults as about two-thirds of a gram per kilogram of body weight per day. Any diet that fails to provide this much protein is inadequate, as the body will burn its own protein in order to obtain the nitrogen necessary for tissue building.

The other function of protein, energy production, can be best understood by following the course of protein food in the body. In the process of digestion it is split into amino acids, which then lose their nitrogen radicle and are finally burned as glucose and fatty acids in the approximate proportion of 55 per cent glucose and 45 per cent fatty acids.

Carbohydrates are present in the diet largely in the form of sugars, starches and dextrins, and in the process of digestion are converted into glucose and burned as such.

The fats are present in food as glycerol salts of the fatty acids and are split into glycerol and fatty acids in the body in the proportion of 10 per cent glycerol and 90 per cent fatty acid. The glycerol is converted into glucose before it can be utilized so that fat produces 10 per cent of glucose and 90 per cent fatty acids in the body.

Tissue Building Continues During Fast

Further facts are discovered in the study of the fasting state. When a man fasts, tissue building does not cease in the vital organs and heat production does not cease. The fasting man first burns the carbohydrate stored as glycogen, then fat, and when the body fat is gone, protein alone supplies the energy necessary for the maintenance of life. Therefore, the internal or endogenous food supply must be taken into consideration when we prescribe a diet that is low in total calories or in protein, carbohydrate, or fat.

Zeller, working with normal men, arranged the diet so that 10 per cent of the calories came from protein, and then keeping the total calories constant varied the proportion of fat and carbohydrate. He found that when the carbohydrate fell below 10 per cent of the total calories, acetone bodies appeared in the urine. He correctly interpreted this as indicating that glucose is necessary for the complete oxidation of fat.

Later Shaffer, working in the laboratory with test tube experiments and in the clinic with diabetics, came to the conclusion that proportion of glucose to fatty acid compatible with complete oxidation of the latter is 1 to 1.5. That is, if the ratio of glucose burned to fatty acid burned falls below 1 to 1.5, the oxidation of the fatty acid will be incomplete and acetone bodies will appear in the urine. Normal individuals on a diet deficient in carbohydrate and high in fat developed an acidosis.

Bearing in mind the fact that protein, carbohydrate and fat are burned as glucose and fatty acid, the importance of this ratio and the need of calculating food in the terms of its ultimate utilization products is quite evident.

In the light of these facts, let us consider the dietetic treatment of diabetes.

Diabetes is a disease characterized by inability of the body to utilize a normal amount of glucose. All the other features of the disease are secondary to this defect. The relation of the pancreas to the utilization of glucose has been clearly demonstrated. Presumably it secretes a substance which unites with glucose and renders it susceptible to oxidation in the body. This, so far as we know, is the only endocrine function of the pancreas.

In Diabetes Pancreas Needs Rest

In diabetes, there is diminished production of this substance, and as the supply of glucose increases, the ability of the pancreas to produce the substance diminishes. Conversely, if the supply of glucose be decreased below the amount that can be utilized, the pancreas recuperates its ability to elaborate its internal secretion. It is, therefore, desirable to keep the body glucose below the limit of its ability to burn glucose; or, in other words, to secure physiological rest for the pancreas.

Formerly de-sugarization of the patient was accomplished by either completely starving the patient or resorting to a "green diet" which practically amounted to the same thing. Under these conditions, the patient simply consumes food from his endogenous supply instead of from his diet. He first burns his fat and when his fat supply is low obtains the same number of calories by burning his own protein, and thus suffers a nitrogen loss. In the later condition, when the patient is emaciated and burning his own protein to obtain calories, there is a marked production of glucose, from the protein; in severe diabetes enough to increase the body sugar above the point of tolerance and thus render the condition more severe.

To recapitulate there are three facts to be taken into consideration when arranging a diet for a diabetic.

(1) The patient requires two-thirds of a gram of protein per kilogram of body weight. If this is not supplied in the diet, it will be obtained by burning body protein.

(2) The patient cannot secure his calories by burning an adequate amount of glucose and therefore burns fat as long as his body supply is adequate. Why not, therefore, supply the fat in the diet and prevent the severe emaciation that we so often see in diabetics.

(3) Acidosis appears when the ratio of fatty acid to

glucose burned in the body is greater than 1.5 to 1.0. This ratio has a considerable margin of safety, as has been demonstrated by Newburgh and Marsh in the University Clinic and described in *Archives of Internal Medicine*, December, 1920.

A Model Diet for Diabetics

The method has been reduced to a routine which is easily followed. On entering the clinic, the diabetic is placed on a diet containing about 900 to 1,000 calories, of which about 20 grams are protein, 14 grams carbohydrate, and 90 grams fat. On this diet the urinary sugar rapidly decreases, and with it the acidosis. As a rule, the diacetic acid disappears from the urine one or two days after it becomes sugar free. After the patient has been sugar free for one or two weeks, the diet is increased to about 1,400 calories, obtained from 28 grams of protein, 15 to 20 grams of carbohydrate, and 140 grams of fat. For a small individual, this is sufficient to maintain caloric equilibrium with light exercise. For larger persons, after a few weeks a second increase is made to about 1,800 calories, consisting of 30 to 40 grams of protein, 25 to 30 grams of carbohydrate and 170 grams of fat.

In a study of 73 diabetics treated in this manner, Newburgh and Marsh demonstrated that (1) glycosuria was avoided even in severe diabetics; (2) that the diet did not precipitate acidosis, but on the contrary that if present an admission acidosis promptly declined and disappeared; (3) that nitrogen equilibrium was maintained; and (4) that the patients are able to lead a moderately active, comfortable life.

The great triumph of this diet is in the treatment of the severe diabetic. There is no great problem in the treatment of the mild diabetic, for a little restriction of his carbohydrate intake is sufficient to keep him free from the diabetic state. But in the case of the severe diabetic, treated by the old high protein diet, it was necessary to either allow him to be continually hyperglycemic and gradually become less capable of utilizing carbohydrate, or to cut down his caloric intake to a point where it was insufficient to meet his daily needs, inanition gradually resulting from slow starvation and rendering him unfit for the ordinary activities of life. Contrasted with this, we have the picture of the severe diabetic on a high fat diet, maintaining his weight, capable of moderate exertion and of earning his own living.

The application of the diet is not difficult. The first stage is that in which the urine is made sugar free. During this stage the patient receives 900 to 1,000 calories; and we are not bothered by the starvation psychosis, which so often interfered with treatment by older methods. During this stage the acidosis disappears, either coincidently with or soon after the disappearance of sugar from the urine. I emphasize this statement about acidosis, for that is the bugbear that has caused us to withhold fat from the diabetic. In the majority of cases, the ferric chloride test for aceto-acetic acid becomes negative on the same day that the urine becomes sugar free.

It is desirable to maintain this diet for a few days after the urine is sugar free to allow the pancreas time to recuperate.

Then in the second stage of treatment, the patient is placed on a diet of about 1,500 calories which is sufficient for maintenance with light exercise except in a large person. If the urine shows sugar on this diet, he should be returned to the previous diet for another week and exercises be limited. Then a second trial with the higher calory diet will usually be successful. This diet is sufficient for small individuals even with moderate exercise, and they may continue on it.

It must be borne in mind that the object of treatment is to keep the amount of carbohydrate burned below the maximum capacity of the individual to burn carbohydrate.

For larger individuals and those who have only a moderate reduction in carbohydrate tolerance, a third or even a fourth stage may be entered upon, always with a careful trial to ascertain how the diet will be tolerated. After a period of three to six months, we often find a marked increase in the ability to burn sugar.

The fats used in the diets have been mainly butter, cream, bacon, olive oil, olives and nuts. These have been well tolerated by the patients. In a few instances where vagaries of taste were encountered, these were overcome by the ingenuity of the dietitian in making palatable combinations. Diarrhea has not been produced by the diet.

The effect of high protein diet on the kidney has been carefully studied by Newburgh.

In a series of animal experiments, it was found that rabbits fed on high protein diet developed acute or subacute nephritis when they assimilated and burned enough of the protein.

Three types of protein were used, egg white, casein, and soy bean, demonstrating that both animal and vegetable protein have the degenerative effect upon renal epithelium of rabbits. In these experiments, the urine contained albumin, casts, and red cells; the blood urea was increased, and the aorta showed typical areas of atheromatous degeneration. Those of us who saw sections of the kidneys recognized the typical picture of acute and subacute nephritis. Some of the animals were allowed to live long enough for repair to occur and these showed the pathological picture of contracted kidney with scar tissue replacing many of the glomeruli and some of the tubules.

Those animals that ate the same diet but did not metabolize a large amount of the protein ingested, did not develop renal injury, so that it is safe to assume that the injury was due to the excretion of nitrogenous products of digestion. A control experiment showed that urea was not the substance that produced the injury.

Squier and Newburgh studied the effect of high protein diet on the kidney of man. The experiments are reported in two groups—with normal subjects and nephritic subjects. Five healthy young men were studied carefully in regard to kidney function and nitrogen metabolism, and found to be normal. They were then given two successive meals which contained a pound of beef steak in each meal. In no instance were red cells found in the urine before the meat meals. In every case red cells were present after the meal. It is therefore evident that protein excess for as short a period as two meals is capable of producing renal irritation in normal subjects.

The second group studied consisted of patients with

THE DIETITIAN'S TENURE

Why do hospital dietitians so seldom stay in one position for a long period of time? Is the fault with the dietitian or the hospital?

Note:—The department feels this query strikes a vital issue in the relationship of the dietitian to the hospital and it earnestly solicits replies from both hospital dietitians and hospital administrators.

hypertension. In all of these cases, there was some evidence of renal abnormality. They were given a high protein diet and in every instance this resulted in the appearance of red cells in the urine and in albuminuria, or an increase in albuminuria if pre-existent. Clinically, they showed an increase in edema, an increase in the albuminuric retinitis and in one case increase in retinal hemorrhage.

These cases indicate that excess of protein increases renal injury when it is present.

We have, therefore, evidence that renal injury comes from three sources, the toxic effect of infections, the ingestion of irritative chemicals such as the salts of heavy metals and ethereal oils, and excessive protein feeding.

Dietetic Treatment for Nephritis

In clinical medicine, the metal nephritis is met with in cases in which the metal has been taken accidentally, or with suicidal intent, and in certain occupations. It is unlikely that it enters largely into the production of chronic nephritis. The other two factors, infection and excessive protein intake are the main causes of chronic nephritis.

In the treatment of nephritis, both factors should be taken into consideration. Focal infection should be sought for diligently and treated efficiently. The protein intake should be reduced to a minimum, and that minimum is about two-thirds of a gram of protein per kilogram of body weight. The balance of the calories should be provided in the form of carbohydrate and fat. In making a diet for the nephritic it is not sufficient to limit the amount of animal protein ingested, but the amount of vegetable protein must also be taken into consideration.

It was formerly held that vegetable protein was less deleterious to the kidney than animal protein, but we now have reason to believe that it is the amount of protein metabolized and not its source that is the important factor.

In this connection, it is well to remember that milk is 3.5 per cent protein on the average and that a quart of milk contains about thirty-four grams of protein, that three heaping tablespoons of green peas, the average amount served, contains six grams of protein, and that the average baked potato contains nearly four grams of protein. These three items provide sufficient protein for an individual weighing 148 pounds. From this it can easily be seen that a milk diet sufficient to maintain life is not desirable in nephritis.

Obesity and Diabetes Interrelated

In the treatment of obesity, similarly the first consideration is to supply the protein requirement. The excess tissue is fat and it does not benefit the patient if he is forced to burn his own protein to supply his nitrogen needs.

The second consideration is to keep the total amount of calories low. In the absence of sufficient calories in the diet, the individual will then burn his own fat. On the whole, the patient is better satisfied if the diet is made up of foods which are large in bulk as compared to their caloric value.

Recently considerable emphasis has been placed on the relation of diabetes to obesity. It is a fact that the majority of diabetics are obese, particularly at the time of onset of the disease, and that a considerable per cent of obese individuals have a diminished carbohydrate tolerence. Insurance mortality statistics show that the fat man's expectation of life after the age of forty is inversely proportional to his degree of overweight.

Obesity is a rather serious condition and its treatment should be undertaken if the patient's interests are to be served.

In treatment of prolonged febrile conditions, such as tuberculosis and typhoid fever, there are specific demands to be met.

In typhoid fever, the basal metabolism is increased, not only by the degree of fever, but also by the typhoid intoxication. The endogenous protein metabolism is nearly twice the normal amount and it is necessary to provide practically 1 1/3 grams of protein per kilogram of body weight if we are to conserve the body protein. The total calories should be at least 3,500 and frequently it is possible to bring them up to 5,000. It is not an uncommon experience now to have our typhoid patients gain weight during the course of the disease. The percentage of intestinal complications is no greater than before; indeed, tympanites is not as frequent as before, and when hemorrhage or perforation occurs the prognosis is better than with a low calory diet because of the marked difference in physical condition.

In pulmonary tuberculosis, the prime consideration in treatment is physiological rest for the lung, and we find that diet has a considerable part to play in the determination of how much physiological labor the lung must perform.

The ingestion of food is followed by an increase in metabolism, which means that more oxygen must pass in between the respiratory epithelium and more carbon dioxide be given off. Recent figures indicate that protein causes about a 37 per cent increase, carbohydrate about six per cent, and fat about two and one-half to four per cent. In addition to this effect, which is referred to as the specific dynamic action of food, there is a still further effect upon the pulmonary ventilation. Carbohydrates increase the pulmonary ventilation out of all proportion to its specific dynamic effect on metabolism.

It follows then that the tuberculous patient should receive a minimum of protein and carbohydrate, and that most of his calories should come from fat, and that he should not receive an excess of calories above his requirement.

These examples serve to illustrate the medical point of view, and explain how the rational use of dieteties in medicine is dependent upon the fundamental facts of nutrition.

TRAINING COURSE FOR DIETITIANS

A course of training for student dietitians is being offered at Mount Sinai Hospital to graduates of accredited schools of home economics. This course is six months in length and includes training in administrative work in the main kitchen of the new private pavilion where 250 people are fed, dietotherapy in the diet kitchen where special diets are prepared and in the milk room where baby feeding formulae are filled. The equipment of these kitchens is of a superior type and thus an opportunity is given to learn the use and care of modern mechanical devices.

A demonstration of nursing procedures carried out by the graduating class on the raised platform of a large auditorium proved a very satisfying method of illustrating a commencement address which was not only stimulating to the graduates, because of their active share in it, but was especially valuable from the standpoint of interesting potential students. This was so successful that it is planned to repeat it.

Hospital Equipment and Operation

With Special Reference to Laundry, Kitchen and Housekeeping Problems

Conducted by FRANK E. CHAPMAN, Director
Mt. Sinai Hospital, Cleveland, Ohio

HOSPITAL SIGNAL SYSTEMS*

By E. NEWTON-WELLS, Signal Engineer, Chicago.

BEFORE going into the subject of doctors' in and out register systems and doctors' locating or pageing systems, as referred to in concluding my article in the April issue of this magazine, it might be well to describe a special type of signal system especially adapted for use in psychopathic wards in hospitals entirely devoted to the care of the insane.

This type of system differs from the systems previously described to the extent that it is provided for the exclusive use of the nursing staff and cannot be operated by the patients. The push button in the patient's room is ordinarily inoperative or "dead." Therefore, any manipulation of the button or station will not operate any of the devices in the system.

The plate can only be removed by the use of special tools, and the button is so constructed that it cannot be disarranged by being jammed or bitten. Therefore, the patient cannot disarrange the equipment located in the room or transmit any signals.

When the nurse wishes to enter the patient's room she pushes a button located just outside the patient's door in the corridor. This action closes the circuit, causing the current to flow as far as the button located in the patient's room which is then "live" and ready for operation in case of emergency, at the same time lighting a bull's eye lamp in the plate outside the door indicating that a nurse is in that room.

If the nurse has occasion to use the emergency system, by pressing the button in the patient's room it will light a lamp over the patient's door in the corridor, a corresponding lamp in the annunciator at the nurses' station indicating the room number, and sound an alarm on the bell located in the annunciator. All these lights and the alarm bell will remain in operation until help arrives at the room indicated. When help arrives the button originally operated is pushed again; this resets the emergency device, extinguishes the lamp over the door, the lamp in the annunciator and silences the alarm bell. This operation still leaves the bull's eye lamp lighted in the plate outside the patient's room, and the button in the room in a "live" condition ready for another emergency call should occasion warrant its use while the nurse or assistants remain in the room.

Upon leaving the patient's room the nurse renders the button in the patient's room inoperative by pushing the releasing device on the button in the corridor. This operation extinguishes the bull's eye lamp in the wall plate, signifying that there is no nurse in that room.

Doctors' In and Out Register System

In modern hospitals it is necessary that the hospital management and the visiting staff of physicians cooperate in every possible manner to their mutual benefit. It is, therefore, desirable that the nursing staff be informed immediately of a doctor's arrival at the hospital as his services may be urgently required in connection with some important case, or his office may be anxious to get in touch with him the moment he arrives at the hospital regarding some one of his patients.

To accomplish this the modern hospital should be equipped with an electrically† operated doctors' in and out register. Such a system consists of a push button plate or board containing two buttons for each doctor. One of these buttons should be white and marked "In" and one black and marked "Out," and directly beneath both buttons a cardholder or designation strip containing the doctor's name. This button control board should be installed near the entrance used by the doctors, or at the entrance to the visiting doctors' cloakroom.

At the information desk an electrically set and reset annunciator should be installed containing as many indications as there are visiting physicians, with their names inserted beneath the indications. Upon arriving at the hospital the doctor presses the white button, which action causes the indication to appear above his name thereby informing the office that he is in the building; the indication remains in view until such time as the doctor is about to leave when he presses the black button and clears out the signal indicating his departure.

In large hospitals this system may be elaborated on by the installation of another annunciator in the telephone switchboard room. This is connected in multiple with the one in the office, but is somewhat different in its operation to the extent that it is really two annunciators combined in the same case, the upper section operating precisely the same and simultaneously with the one in the office. Say, for instance, that twenty doctors were in the hospital at the same time, twenty indications would appear on both annunciators. As other doctors arrived this number would be increased, and as they departed this number would be decreased.

*This is Mr. Newton-Wells' second article on signal systems in the hospital. The first appeared in the April issue.

†Mr. Newton-Wells, in his treatment of doctor's in and out registers, confines his remarks entirely to electrically operated systems, in contradistinction to the manually operated types which are in use in many institutions.

The lower section in the annunciator in the telephone switchboard room is blank, for the purpose of this article, while the upper section shows twenty indications. Upon the arrival of another doctor the upper section indications will be increased by one, making a total of twenty-one indications up while the lower section shows but one indication. With this arrangement of signals the operator looking at the lower section really sees the doctor arrive at the hospital, so to speak, after which she presses a button which clears out the lower section. This does not interfere with the records shown in the upper section which then shows the doctor in the hospital. Upon leaving the hospital, as previously described, the doctor presses the black button and clears out the indication above his name on both the office annunciator and the upper section of the annunciator in the telephone room.

With such a system the management and visiting staff cooperate to the fullest extent. The general efficiency of the hospital is increased, and the visiting physician is assured that his office may know of his presence in the hospital or of his departure by calling over the telephone, thus eliminating all the possibility of guesswork which exists where such systems are not in use.

Annunciators for tbis purpose may be either the lamp or the French target indicating type. Of the two the writer recommends the use of the French target type, as the same service is rendered at considerable less expense for the original installation cost, current consumption cost and general upkeep.

Doctors' Location System

Such systems are installed in hospitals for the purpose of locating the superintendent whose duties require him to be away from his office at frequent periods, or for locating visiting staff physicians when their offices desire to get in touch with them. There are various systems on the market for accomplishing this purpose:

One method is to install sounders, similar to telegraph sounders, at various points throughout the hospital. These are actuated from a telegraph key or code calling device located at the telephone operator's desk. When a telephone call is received for a doctor the operator sounds the call on the system and the doctor calls the telephone operator from the nearest telephone. This system embodies one feature sometimes considered objectionable. The signal is given by ticks or dots, as in the Morse code, and its success depends entirely upon the doctor's being able to distinguish his particular call.

Where sounders are considered objectionable a lamp annunciator may be installed at various points, say at the nurses' station on each floor, and doctors' calls are sent out by the operator pressing a button on the button board. The board contains one button for each doctor, and by pressing the button a lamp is lighted in the annunciator on all floors which illuminates the name or number previously assigned to the doctor. The lamp annunciator system is recommended by the writer: first, because it operates silently, and second, because the signal remains up until cleared out, whereas in the majority of other systems the call is for the moment of announcement. The advantage of the lamp annunciator may be appreciated when one realizes that from the time the lamp is lighted it is a constant reminder to the entire nursing staff that Dr. ———— is wanted.

Another type of system is the flasher type doctors' pageing system which consists of a single or double face lamp annunciator with two types of indications, alphabetical and numerical, arranged in vertical rows. The first vertical row is alphabetical and the second is numerical.

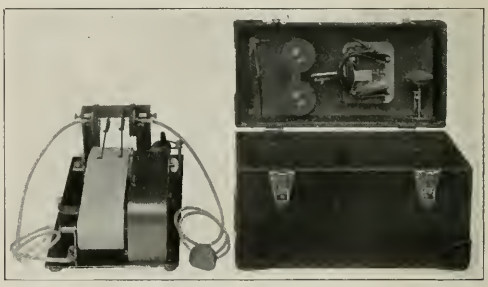
The call is set up by the telephone operator, and by means of a motor-driven flasher a signal is flashed on the annunciator until the call is reset. The advantage of the system is that a greater number of individual calls may be flashed on a smaller number of lamps by a combination of the alphabetical and numerical indications. Its chief disadvantage lies in the fact that, like the sounder system and the speaking annunciator system, only one call can be sent through at one time; whereas in the other annunciator system described the entire visiting staff could be signaled at one and the same time without interference. However, this is not to be construed as any great disadvantage as it is rarely, if ever, that two calls are put through simultaneously.

Such systems as described above should, in order to obtain the best results, be planned by a competent engineer and installed by a competent electrical contractor in accordance with plans and specifications as prepared by the engineer.

A NEW DIAGNOSTIC APPLIANCE

One of the interesting developments in diagnostic equipment is a new pulse wave recorder. This device has been recently developed from the suggestions of Dr. Thomas Lewis of England, Prof. T. Stuart Hart of Columbia University, and Dr. Paul D. White of Harvard Medical School.

It differs from many sphygmographs now in use in that it produces two clear-cut sphygmograms, showing the pulse wave during a complete cardiac cycle, one taken from the jugular vein and the other from the brachial or radial artery. The automatic timer divides the tracing into spaces



of $\frac{1}{5}$ second. Every clinician will recognize the value of this method of diagnosis, particularly in cardiac affections.

The instrument is extremely compact and is at all times ready for use without complicated assembling. The arterial wave is obtained by applying an arm-band to the radial artery at the wrist, the brachial at the elbow, or the brachial on the upper arm, while the venous wave is secured by holding a diaphragm over the jugular vein. A simple gravity adjustment of the recording pens insures uniformity in tracings.

RECIPE FOR MAKING A GOOD NURSE

Mix together equal parts of pluck, good health, and well-balanced sympathy; stiffen with energy, and soften with the milk of human kindness; use a first-class training-school as a mixer; add the sweetness of a smile, a little ginger, and generous amounts of tact, humor, and unselfishness with plenty of patience. Pour into the mould of womanhood; time with enthusiasm; finish with a cap; and garnish with ambition. The sauce of experience is always an improvement to this recipe.—*Alumnae Record, Buffalo General Hospital.*

LABORATORY TABULATOR IS AID IN MAKING DIFFERENTIAL BLOOD COUNT

By C. PEÑFLOR, M.D., Manila, Philippine Islands

THE importance of the differential count of blood corpuscles is universally admitted, not only as a means of weight in pronouncing a reliable diagnosis, but also as a useful gauge for the prognosis and probable outcome of a disease.

In making this examination the eye becomes, in a certain degree, focused upon the field presented by the microscope. Upon removing that from the eye-piece to record each individual finding, the eye returns to its normal; and when it is reapplied to resume the examination it must again adjust itself. This, as well as the ordinary method of recording the results, constitutes a great loss of time, and when a considerable number of examinations are being made, as in municipal, college or hospital laboratories, to the loss of time may be added the danger of unreliable recording and often a continuous tension of the muscles of the eye which may lead to final weakening, fatigue and disturbance in its normal function.

To facilitate differential blood counting and to obviate the dangers above described, the author is presenting a machine—a sort of tabulator—whereby more easy, rapid and reliable results are obtained and for which operation less training is required than for an ordinary typewriting machine.

In this machine a differential count is accomplished with one hand, leaving the other free for focusing or changing the relative position of the plate and microscope. In the operation of this machine all that it is necessary to remember is the relative position of the keys corresponding to the different kinds of white blood corpuscles. The required key is depressed in succession as many times as the corresponding corpuscle appears in the field under observation in the microscope. Every number is registered and added to the previous ones of the particular variety of corpuscles. The separate sums for each variety are at all times shown by the numbers appearing in their respective positions above the keys, as well as the grand total of all the separate sums. When this total reaches 100, or a multiple thereof, up to and including 500, a bell rings. As it is often desired to express the sums of the different varieties as percentages of the grand total, the machine affords an easy way to accomplish the result. Thus, when the person making the examination hears the bell ring, he immediately knows that he has reached a grand total of 100 or some multiple thereof. If he wishes, he can then read the sums of the individual counters, which will give the percentages direct if the total is 100, or will give the percentages by dividing by the multiple, if the total is a multiple of 100.

The machine is 6"x6"x1⅞" high at the rear not including the rubber pads on the bottom which are ½" in diameter and ¼" thick, nor the projection of the keys which is 11/16", which would make the over all dimensions 6"x6"x2 13/16".

As may be seen from the figures, the size of the machine appears larger than seems to be required for the tabulator alone. This additional space has been purposely made to provide a rest for the wrist while operating the machine. To take advantage of this increase in size, a storage space has been provided which is accessible through an opening in the top over which is a hinged cover. This storage space is 4⅞"x3½"x1⅜" high at the front owing to the slope of the top of the machine. The storage space through special arrangement can be used to store blood smears as well as any small instrument or equipment used in connection with the examination.

The inventor claims for the apparatus the following advantages:

1. It facilitates differential blood counting.
2. It insures accurate and exact results.
3. It gives off hand the percentages of the white corpuscles after one counting, without any further figuring.
4. It avoids fatigue and weakening of the eye, and other visual disturbances consecutive to those conditions.
5. It can be used for making differential counting of pathological erythrocytes, and, in fact, for any other examination that involves percentage finding by simply substituting the name of leucocytes with appropriate labels.

PULL A LINEN CORD AND SIGNAL IS GIVEN

One of the established manufacturers of hospital signal systems has recently completed the development of a manually operated hospital signal system switch.

The new switch, toggle type, is operated by pulling a linen cord. The toggle switch is simple and requires only a one gang box. Since it is often desirable to give a momentary audible signal, the switch is equipped with an auxiliary bell contact. When the patient stretches the cord to its limit the bell contact is closed, and as long as the cord is held taut the bell signal operates.

One of the advantages of the new switch is the fact that the linen cord can be readily changed and at all times kept clean and sanitary.

There is no darkness but ignorance.—Shakespeare.

THE CARE OF YOUR SILVER SERVICE

By JAY KRAUS, Chicago.

A PIECE of silverware, be it common spoon or fork or finest piece of hollow ware, is really a work of art. Artistic minds have designed it, trained intellects have produced the equipment with which it was made, skilled hands have fashioned the ware itself. For all ages, silver has been esteemed and akin to a luxury. Today when modern manufacturing processes have brought its cost to within the reach of all, it should be esteemed no less, and most of all in the hospital, held worthy of proper care so that its condition will always please the most fastidious.

Neglect of silver is quickly reflected in the ware because of the tendency of silver to tarnish and to be stained by food stuffs. Tarnish is caused by certain elements of sulphur prevalent in the atmosphere. If silver could be kept away from all air it would not tarnish. Keeping it in airtight compartments helps somewhat. A fact little known is that the presence of camphor (bulk camphor, not the moth ball variety), tends to retard tarnish, and thus it may be used to advantage in silver storage receptacles. In the winter when much coal is being burned, silver tarnishes rapidly, owing to the greater amount of sulphur in the air; this will also explain why silver kept near gas-burning ranges tarnishes rapidly.

Egg yolks contain a large percentage of sulphur. Thus spoons served with eggs come back to the kitchen badly tarnished. Rubber also is sulphurous, as is fiber, and both should be kept away from silver. Keep stray rubber bands out of the silver boxes. Don't wash silver in fiber receptacles. Several complaints of silver tarnishing badly, although it was cleaned daily have upon investigation been traced to washing in fiber tubs or in water transported in fiber pails.

Acids in certain foods cause discoloration. To find the cause for this, one must go all the way back to the soil and fertilizer which produced the food. Some strange phenomena have been observed in this connection; for instance in a certain cafeteria where tomatoes are dished out with a silver ladle, several brands of canned tomatoes are carried in the storeroom. If one particular brand is used, for which the tomatoes have been grown in a certain section of the country, the ladle will discolor to a deep blue-brown shade. If on the following day another of the brands is used, produced in an entirely different locality, the ladle will clear itself of its discoloration and take on a high luster.

How properly to care for silver without an undue amount of labor is your problem. The large modern hospital is nearly always equipped with a burnishing machine and a competent operator whose work is scheduled in such a manner that each part of the silver service in turn is properly cared for. But what of the smaller place?

Old-Fashioned Silver Polish Is Good

Good old-fashioned silver polish, any reliable brand, can scarcely be excelled for results. But use a polish, not "whiting." A polish has all the shining merits of whiting and in addition other ingredients that remove tarnish and leave a protective film. After applying the polish and rubbing, use a hot water rinse, the hotter the better, then a final polish with a soft cloth.

The various silver cleaning pans on the market offer a solution for removing tarnish from a large quantity of silver in a short time. They, however, do not polish the silver, but this can easily be accomplished by a hot water rinse after use of the pan, then a rub with a soft cloth.

Here is a short cut in the removal of tarnish, but one which must be used with the utmost care; indeed I almost hesitate to mention it for fear it will be carelessly handled. Cyanide of potassium, which is a most deadly poison, is the speediest remover of tarnish known. It may be made into a solution using about six ounces to a gallon of water. It must be kept in a stone jar, always covered.

Use a wire basket (a French fry basket works splendidly) and dip the silver to be cleansed into the solution for just two or three seconds. The tarnish will be removed almost instantly. Then rinse the silver immediately and thoroughly in as hot water as you have available. Rinse not once, but twice. Remember that the cyanide is intensely poisonous, and you must not risk its getting into any food nor into any person's mouth. If you cannot have some responsible person do your dipping and rinsing by this method, do not use it. The use of the hot water rinse, in addition to thoroughly removing the cyanide, makes it easy to impart a high luster to the silver by rubbing with a soft cloth. The solution will last indefinitely but after long use, should the dipped silver show yellowish spots, add fresh cyanide to strengthen.

We are all familiar with the sight of the patron wiping off his silver on napkin or tablecloth with a resulting black streak on the linen. Many a hospital man has puzzled over this, washing and scouring his silver ever so carefully still to find the black adherence. The next time this happens to you, don't blame the silverware as being of poor quality, but *change your soap.* It is a fact that certain soaps or cleansers in combination with certain grades of water will produce the result which is usually thought inherent in silverware, and a little experimenting on your part with your cleansing materials may be most helpful.

Knives Need Special Care

The care of knives deserves special mention. Unlike other pieces of flatware, knives are made of steel and are therefore subject to rust. The "solid handle" knife in most common use is forged entirely of steel in one piece, ground and polished to a high degree of fineness, then silver plated. "Hollow handle" knives have handles made of nickel silver and only the blades are of steel, the two parts being securely soldered together and the whole silver plated. The coating of silver is most durable, but at three points along the cutting edge of the blades, at the shoulder in the center of the knife on which the weight always falls, and the upper end of the handle, the wear is so severe that the silver deposit is worn through rapidly. The first pin-point area of steel exposed affords opportunity for rust to attach, and once lodged, it then begins to work *under* the silver deposit. Like a spoiled spot in a barrel of apples it spreads and may ruin the entire knife. It not only affects the plating but pits the steel so badly that often

the knife is not worth replating. Knives should be dried more carefully than other pieces of silver, never left moist overnight, and if rust spots are observed, should be scoured or cleaned with kerosene to remove and prevent its spread. But do not expect as much service from your knives as from spoons and forks.

Steel knives, for service with steak or meat orders, present a special problem. The highly sharpened blades always spot and blacken and must be scoured or put through a knife cleaning machine after each service. The best solution is to buy knives with stainless steel blades, the prices of which have been reduced materially within recent months. Stainless blade knives may be had with ebony, rubber, nickel and even silver handles at prices within reach of any establishment.

I am often asked "Why shouldn't we buy the nickel silver unplated goods (usually known as white metal) and avoid all trouble with silver plate wearing out?"

Most emphatically, I answer no. Such ware is not a good buy for any establishment. True, it is exactly like plated ware, save that in the last operation of manufacture instead of being immersed in the plating tank and coated with silver, it is simply given a high polish on the buffing wheel. But without the protective deposit of silver, it absorbs grease, is stained by acids, turns dark and always has a sticky, slimy feeling. It may be compared with a table with a white wood unfinished top, which also absorbs and takes stains, but if the top is varnished all these faults are overcome. So it is with the nickel silverware. Although they are unsatisfactory when unplated, the same blanks transformed into plated ware by a deposit of silver make standard and thoroughly ideal silver for all purposes.

The matter of selecting the proper quality of silverware for use in a hospital is not always given the most careful consideration. A number of reputable manufacturers of silverware have given many years to the building up of a quality especially adapted to the needs of establishments catering to the public. Obviously, the purchase of silver other than in these grades is a waste of money. It is false economy to expend the silver appropriation for grades of ware made primarily for retail sale and household use.

Hospital Must Not Buy Ordinary Silver

Silverware made especially for hospitals and institutions is characterized by a number of factors. In flatware, the base metal is never a grade containing less than eighteen per cent nickel content. The formula under which this grade of metal is worked out has been arrived at through many years of experience. The actual weight of the metal put into the blanks is considerable above that of ordinary domestic silver. The increased weight is absolutely necessary if the shanks of the spoons and forks are to be reinforced, the spoon bowls made heavy and the fork tines strong. The fallacy of buying ordinary silver, even though it be the well advertised brands, would be made clear to the readers of this article could they see the collection on the writer's desk of spoons with twisted handles and distorted bowls and forks with broken and twisted tines gathered here and there from institutions which have not kept to the established grades of public service silverware.

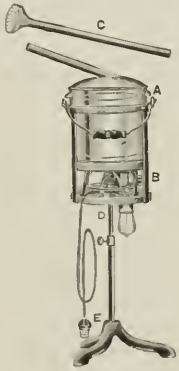
In the selection of items of hollow ware, such as coffee pots, tea pots, cream pitchers, sauce boats, soup tureens, sugar bowls, etc., it is even more important that nothing but special "institution grades" be selected. The abuse to which this class of silver is put is sometimes almost undescribable. Unless the same grade of base metal as described before is employed, of extra heavy weight, properly reinforced, mounted and soldered with the best grade of material, the ware cannot be expected to withstand the hard service.

Does silver service pay? Is it economical to replace china and glassware with corresponding items in silver? You can easily determine the answer to the latter question by making comparison of the cost of silver divided over a period of five, ten or even fifteen years with the cost of china or glassware and its replacement for the same length of time. One usually finds that an investment in such items as butterchips, creamers, sugar bowls, pots and platters does pay. Silverware is bought on confidence, and unless you can have perfect confidence in the manufacturer from whom you buy, you may learn to your regret that your investment has been misspent.

Reflect on this when you next survey your equipment and take steps to keep up the standards of your service by purchasing the right kind of silver from a dependable source of supply.

NEW MODEL OF CROUP STEAMER

Numerous hospitals have experienced difficulties with the ordinary form of croup kettle. In fact, one hospital was sued for $5,000 because of the death of a child from burns received when the bed clothes became ignited. As a result that many inquiries for a solid croup kettle which can be placed on the floor and operated electrically, a prominent manufacturer has placed such a device on the market.



This kettle was devised by Mr. Louis Levy, superintendent of the Jewish Hospital of Cincinnati, and a considerable number are used in the children's department of that institution.

The illustration shows the simplicity of the outfit. The nickel plated copper reservoir is securely held in place by a frame attached to an adjustable floor stand, which can be raised to the exact height of the crib.

In the copper reservoir is a copper bucket which rests directly on an electrically heated hot plate. The stand is equipped with pilot lamp to show when the current is turned off. An adjustable extension tube permits the apparatus to be placed some distance from the crib to prevent the danger of burns or of the bedding catching fire.

A TREATISE ON THE CHARACTER OF AN EGG

"Eggs are of themselves very valuable as food, and they are highly prized by the cook for their fine vesiculating quality. But they are very liable to change, and unless very carefully prescribed they soon "survive the period of their usefulness." They are fit for food only when their reputation is above suspicion. In the transportation of eggs for food it is nearly as important that their internal structure should remain unharmed as that their envelope should remain unbroken. An egg "whose cover has slipped off" is difficult to handle, but an egg whose interior integrity is destroyed, soon is not worth handling." *Report of the National Board of Health of the U. S.*, 1879.

Occupational Therapy and Rehabilitation

Conducted by Herbert J. Hall, M.D., President, American Occupational Therapy Association, Devereux Mansion, Marblehead, Mass., and Mrs. Carl Henry Davis, Advisor in Occupational Therapy, 825 Lake Drive, Milwaukee, Wis.
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CLASSIFYING THERAPEUTIC OCCUPATIONS FROM THE STANDPOINT OF MENTAL PATIENTS

By ETHELWYN F. HUMPHREY, Director of Occupational Therapy, Boston Psychopathic Hospital, Boston.

THE bare institutional ward with its rows of blank faces ranged along the walls is fast rousing itself into color and activity and interest. New motives, new standards, new methods are developing. Occupational therapy is showing its vigor in the way it is striking out in practical work, leaving us to formulate our theories to fit facts already accomplished. It forges ahead leaving in its train whole series of questions which we are only beginning to try to answer.

Is it possible to classify the occupations used in occupational therapy so that definite work can be prescribed for definite disorders? This is one of the questions most frequently asked of the teacher. There seems to be a feeling that before it can be admitted to the rank of a therapeutic science the kinds of work to be used in occupational therapy must be labeled and arranged like the bottles on the pharmacist's shelves to be administered each for its specific disease. How far is such a definite classification possible or desirable?

On the one hand, occupational therapy relates to the physical treatment of the patient; and on the other, it is more closely akin to the psychic reorganization. Along physical lines the classification is comparatively simple. The patient needs exercise for this or that group of muscles. Work can be selected according to the requirements. Knotting gives finger movements, weaving gives arm and body development, foot power lathes and jigsaws furnish foot and leg exercises, and so on with comparative ease. The various occupations can be definitely assigned for a definite need. The impetus of interest and the desire to accomplish some definite result combine to furnish a particularly valuable form of exercise. Effort which would otherwise fatigue becomes stimulating. Here we have a perfectly definite result to be accomplished by a definitely prescribable means.

Reorganizing the Personality

But where the mental effect upon the patient is the primary end, our whole problem takes on a different aspect. As soon as we get away from the physical standpoint, we at once realize that there is no firm basis for a rigid classification. The demand is not for the exercise of a group of muscles, but for the reorganization of a personality. The exercises which give the desired result with the finger muscles of one patient will probably give similar results with the next case. But in attempting to reach and influence the personality one must be prepared to use as many methods as one has patients. There are so many uncertain elements that each new case is a new problem demanding individual study and treatment.

Even in the case of patients whose medical diagnosis is similar the same work is not always indicated. A patient's interest and aptitude for any given occupation are determined not only by his present condition but by his previous training and trend of mind. Was your patient an art student or a machinist? From the medical point of view the question might not be of great moment but to the occupational teacher it is of primary importance.

The need of a flexible occupational system is felt even with normal patients when the work is used to build up morale during convalescence and to assist in readjustment to normal life. But in dealing with cases where there is definite mental disorganization, the teacher must be free to choose any method of approach which gives promise of making the necessary contact. We may say that in cases of dementia praecox, we have a withdrawal of interest; occupation is needed to fix the attention of the patient on something outside himself. Weaving makes insistent demands on the attention, therefore, weaving should always be used in cases of dementia praecox. As a matter of fact, weaving is good, but equally good results may be obtained from woodwork, bookbinding, metal work and many other forms of activity. Your next patient may upset all your theories as to what he should be interested in; he may refuse to do technical work of any kind and you may catch him on decorative painting. It is not enough that theoretically the work shall be suited to a certain type of disease. It must be suited, not only to the disease, but to the patient as well. The whole matter of the previous tastes, set of mind and level intelligence must be considered.

While it does not seem possible to standardize occupations in any rigid system, it may still be useful to consider the actual work involved in the various problems from the point of view of the mental patient. It should be possible to map out certain classes into which whole groups of projects fall. We might separate first the rhythmic or mechanical group, involving the regular repetition of a series of simple acts. The intellectual

demand is slight, yet it is insistent. It calls to its aid the soothing, hypnotic quality of rhythm. The same act repeated indefinitely gives the patient time to reorganize and concentrate his forces before any new demand breaks the sequence. Typical occupations of this sort are the simplest forms of weaving, rake knitting, knotting and and many others in which a more or less simple process is repeated indefinitely.

This type of work is indicated for patients who show a low level of intelligence and poor correlation between hand and brain. It is of great value wherever the teacher is met with the necessity of reeducation. It may take days of the most painstaking, concentrated effort on the part of the teacher to train a patient so that he can perform accurately and independently even the simplest of these occupations. It is sometimes necessary for the teacher to simplify and simplify again until finally she reaches the level at which the patient is able to grasp and execute. However, if she is once able to strike firm ground and give the patient the feeling that he has succeeded in a definite accomplishment, she has something upon which to build. After a time the patient many have gained sufficient confidence so that a step ahead to a different series of operation is possible. As he improves in powers of coordination and mental grasp, he will gradually become more flexible and be able to adapt himself more easily to the various requirements made upon him. When he undertakes a piece of new work and succeeding in it says, "I can do that now, but I couldn't have done it at first," then you know, and, better still, he knows that he is gaining ground. The project may be as simple as need be but as far as possible the patient should be held to good workmanship.

It is impossible to specify any one diagnostic group for which this rhythmic, mechanical work should be used. The line of mental level cuts horizontally across many unrelated groups. In cases of original low grade intelligence, it is a question of beginning where the patient is and pushing as far as capacity admits. Where there is definite, progressive deterioration to be expected, occupational work of this type is most valuable in checking decay and holding the patient to a better level than might otherwise be possible. Oftentimes the deterioration is only apparent. In cases of confusion, depression, exhaustion, preoccupation with bodily and mental symptoms, work of this sort is often the first step in the return to a more healthful attitude. It is also a most valuable method of approach to new patients who show lack of confidence and inability to make contact with the outside world.

The Technical Group

The second great group of occupations is what might be called technical. They are the occupations which call for a more active intelligence, closer concentration and a more careful coordination between hand and brain; in short, the ability to cultivate a certain degree of technical skill. Here falls the great body of occupations generally used, weaving, bookbinding, basketry, woodwork and so on through the list. In some institutions work of this type grades up to vocational training. At the bottom this group coincides with the mechanical, but on the whole these are crafts demanding a higher intelligence level and greater flexibility in changing from one operation to another. We work upon the theory that there is distinct therapeutic value in the interruption of bad thought habits which the patient may have formed. The holding of this attention on something concrete and definite outside himself tends to break up undesirable mental trends and to give him a chance to react normally to the normal stimulus which we supply. The work helps also in the formation of better habits, giving training in concentration, initiative and steadiness of application. The choice from the great body of occupations in this class is determined almost entirely by the natural interest of both teacher and patient, materials at hand and conditions of work.

There is also a third general class into which occupations fall. This is the creative or artistic. Here again, there is an overlapping because if the work done in either of the other groups is to have intrinsic merit, there must be art values at the foundation of every problem. In the group of mechanical occupations the chance for artistic expression is the simplest, yet even here it is fundamental. It should enter very largely into the consideration of the teacher in planning the problem and, as far as possible, she should arouse the appreciation of the patient in the creative aspect of his work. If a rug is to be made there is the problem of colors, proportion, spacing of borders, and so forth. In the technical group the question of the artistic foundation becomes increasingly important. Someone must plan each piece of work along the lines of good art. Our weaving must be fine in color and texture, in spacing and dark and light, our basket must have fine proportions, our pottery fine lines and tones, our decorative work of all kinds must be good in design. This work still devolves largely upon the teacher; the patient furnishes hands for the designer.

Creative Occupations Form Third Group

But in the third group of occupations, we make a definite effort to gain the cooperation of the patient in creative work. Choice of colors and problems of form are presented at every turn. In every active department, there is a constant pressure for new designs. Design work is of special interest when the relation between the design and the actual working out of the problem is so close. Design can be originated or adapted by patients and applied to all sorts of uses. The patient will often carry over the interest thus aroused into the actual technical working out of the problem. To see a project which we have designed take on bodily form gives us all a most thorough satisfaction. Lettering, done with care as to spacing and form, makes an excellent problem and is in constant demand for posters, cards, and so forth. It is surprising how often drawing and sketchings are asked for in a department; sometimes by the boy who says, "I always wanted to study art, but my folks never would let me;" sometimes by the girl for whom it is a window opening out of a life of drudgery. An interesting group of objects set up in a corner of the occupational room is all that is necessary for a beginning in still-life drawing and the interest it arouses and the possibilities it offers for careful work are endless.

Creative work of varying sorts is adapted to a large range of patients. Oftentimes we have individuals of good ability in whom the creative instinct is still active. These patients can be used on various problems connected with other types of occupations. The hooked rug which is to be done by a mechanical worker may be drawn and designed by a patient who needs creative stimulus. Work of this sort is also used with interesting results for patients of artistic taste who have become so badly disorganized that close technical work is impossible. Patients of this type often respond in surprising ways to a

chance to use line and color. They sometimes show an unsuspected energy and activity in developing problems of their own. Oftentimes the trend of the mind is interestingly shown in the work produced. There is another group to whom artistic projects of various sorts are a great joy. These are the people of naturally fine instincts who have never been able to express their love of the beautiful because of the hard conditions of their life. These are the ones who say when shown something fine, "I always wanted beautiful things, but I had to work so hard for a living!" For some of these an occupational department is a source of great pleasure in giving a chance for the gratification and expression of an innate love of beauty.

These then are the great divisions into which our work naturally falls: mechanical, technical and creative. Practically all of the occupations which we use can be classified under one or another of these heads. A careful occupational assignment is determined by the natural trend of the patient's interest and the level at which he is able to make his connection with the outside world. Within the main groups the exact form of occupations must be largely determined by the personal equation of teacher and patient.

OCCUPATIONAL AND RECREATIONAL THERAPY AT THE KALAMAZOO STATE HOSPITAL

By MARION R. SPEAR, Director of Occupational Therapy, and HAROLD J. GARRISON, Director of Recreational Therapy, Kalamazoo State Hospital, Kalamazoo, Mich.

THE department of occupational therapy at the Kalamazoo State Hospital is not carried on for the benefit of those patients who are already skilled in the many forms of handiwork. Its purpose instead is to arouse interest and hasten recovery of those mental patients so absorbed in their own troubles that they take no interest in their surroundings, this being done by means of some activity definitely prescribed and guided by trained workers. It has always been the theory of Dr. Herman Ostrander, medical superintendent, that every patient who is physically able should be busy at something, as it not only prevents him from brooding over his troubles but aids materially in the reconstruction of both mind and body.

At present an average of 250 patients are enrolled daily in this department, some attending class not more than one and one-half hours while others are kept busy for a period of five hours.

Patients at work in one of the occupational therapy rooms at Kalamazoo State Hospital. The patient at the extreme right is deaf, dumb and blind.

First comes the kindergarten class composed of twenty dementia praecox patients ranging in age from twenty to forty years. There patients assemble each morning at 8:30 in a special class room on their ward. The room is made attractive with curtains, hanging baskets, plenty of chairs and two long tables. The group is being reeducated, and their training is much like that given the small child. Those who are stupid and morose are aroused by bright colors; stringing wooden beads, winding bright colored carpet rags and coloring pictures with crayons are some of the more common methods of approach.

Those of the more excited type are given picture puzzles, spool-knitting or some occupation which is simple but which requires concentration. In the afternoon this same group meets with a different instructor under whose direction the patients are taught very simple games and songs.

These patients in time are graduated from the reeducational class to the occupational building where four large rooms are devoted to the training and development of nearly one hundred patients, most of whom are kept busy for five hours each day. Here the occupations are applied to the different types of patients and graded as follows:

1. Occupation lacking in interest.
   - Tying bits of yarn or warp together
   - Ravelling burlap sacks
   - Winding thread or yarn in balls
   - Filling bobbins
   - Winding rags on shuttles
   - Spool knitting
2. Occupations requiring some effort of attention
   - Sewing carpet rags
   - Simple embroidery
   - Crocheting of rag rugs
   - Tying fringe on rugs
3. Occupations requiring fairly constant attention.
   - Knitting
   - Crocheting
   - Applique work
   - Stenciling
   - Making of braided rugs
   - Painting and staining
   - Manual training in its simpler forms
   - Reed work
   - Raffia and pine needle basketry
   - Plain or rug weaving
4. Occupations in which variety and originality create interest.
   - Pattern and pickup weaving
   - Bobbin lace
   - Persian knot and hooked rugs

A group of patients too disturbed mentally to take part in the work in the occupational therapy room.

Copper work: hammered, sawed and etched
Tin can toys
Leather work
Clay modeling and pottery
Fibre reed furniture
Mechanical drawing

Those patients who advance to this last group of occupations are encouraged to help each other, and in so doing they acquire self-confidence, that quality which is much to be desired. One patient was so successful in helping others that she has been put in charge of a class of thirty-five patients at the Colony Farm. At that place the work is conducted in much the same manner as at the main building, with graded occupation for the chronic cases in the morning and the reeducational and singing classes in the afternoon.

While the women are busy throughout the day in their various classes, there is a certain class of men unable to be of use in the industrial building or out-of-doors who are occupied as follows:

A group of thirty-five or forty of these older men meet every afternoon, each being instructed in a different occupation, spool knitting, rug weaving, basketry and toy-making being a few of the many occupations. Two large dormitories redecorated and fully equipped with necessary materials make the work a pleasure rather than a drudgery.

Still another large room in a different part of the building is devoted to the industries of the ex-service men. Here a class of fifteen boys is taking much interest in the construction of fibre reed floor lamps and furniture. The class though still in its infancy has a promising future.

Besides these several classes there are many other patients who prefer to work in their rooms. The patients are visited once or twice a week by an instructor and kept supplied with materials to last until the next visit is made.

In addition to those articles made for use in the institution, such as rugs, table covers, reed lamps, etc., there are those which are made for sale. Just before Christmas in 1921 a bazaar was held in the amusement hall where the patients presided at the various booths and took pleasure in selling those articles which they had made during the winter.

Occupational therapy is not wholly confined to classes held indoors. During the summer months many of the more comfortable patients are allowed to go for a walk during the latter part of the class period. Each trip is made with some object in view, such as: gathering pine needles and grass for baskets, acorns to be made into beads, weeds to be painted for winter bouquets, clay which is used for pottery, milkweed pods and butterflies for decorative trays. Then too about eighteen of these same patients have their individual gardens. Each is allowed a small plot in which she raises vegetables, which require no cooking, and flowers. At the end of the season a prize is offered for the garden best cared for; this stimulates keen rivalry and holds the enthusiasm until the end.

All work and no play appeals to the insane as little as to the sane, therefore, once a month about seventy-five of the more comfortable occupational workers, both men and women, meet together for a party. Games, dancing and refreshments are the usual order of procedure. In the summer outdoor picnics take the place of the parties, and in the fall there is a "weenie roast" at the Colony Farm, the patients being conveyed there in hay racks. On these outings the occupational class at the farm joins in the good time. Such occasions as the latter are long to be remembered and furnish subject for reminiscing during the long winter months.

Closely related to the department of occupational therapy is that of recreational and physical therapy. During the fall and winter this department is conducted in a building which is set aside for this purpose alone. One part of the building comprises the chapel proper in which all religious services are held. The chapel seats approximately seven hundred patients and contains a modern pipe organ and a piano. The music, both vocal and instrumental, is all furnished by the patients, there being a choir of about twenty-five voices; regular choir rehearsals are held under the leadership of a vocal teacher. Special numbers are given at Easter, Thanksgiving, Christmas, etc. The chapel is also used for concerts and community singing.

The other part of the building is what is known as the amusement hall. This contains a stage, scenery and dressing rooms and is used for plays, motion picture shows and dances. Last Christmas a play was given, the caste being made up entirely of patients, while in the

Old men, too infirm to work in the industrial building or on the farm, here find a fascinating method of whiling away the hours.

Young girls in one of the occupational therapy work rooms at Kalamazoo intent on handwork of interest.

fall a play "Dr. Cure All" was presented. It was repeated as a feature of the bazaar held by the occupational therapy department.

Patients Enjoy Sports and Social Affairs

The amusement hall is also used as a gymnasium, the window guards, baskets, etc., being removable. There are held basket ball games, indoor base ball, volley ball and many gymnastic contests. Patients are taken to the gymnasium in groups of about twenty, part of the period being taken up with calisthenics and the remainder devoted to games.

Once weekly a dance is held in this hall for patients. Motion picture shows are held every week and card parties on the different wards about every two weeks. The music for all these occasions is furnished by the patients' orchestra of five pieces.

When the various social affairs are discontinued in the spring, the patients have access to a large modern playground on which are courts for tennis, basket ball, volley ball, roque, lawn bowls, quoits and patch ball. During the day groups of patients are taken out on the playground and in the evening other groups enjoy the various outdoor games until bedtime.

The hospital also has a baseball park which compares favorably with any in the city. The more active patients play here and the hospital maintains an employes' baseball team which meets the best amateur teams of the city. The patients are taken in groups to enjoy these games.

All of these varied activities are under the supervision of the recreational and physical director.

July 4 of last year this department and the occupational therapy department united and produced one of the most elaborate pageants ever attempted in this section. Over two hundred patients took part in the spectacle which was held on the spacious lawns of the hospital. The eagerness of the patients to take part and their close cooperation in the rehearsals was a large factor in the success of the pageant.

The institution is ever on the alert for new ideas, knowing that much good is being done and realizing that there is more yet to be accomplished in this work in order that it may send its people out into society well both in mind and body so that they may do their part in making our state the best in the union.

"SCIENCE SO-CALLED"

Certain Chicago psychiatrists have admitted visitors to their workshop.

Here—they point out—is the prize bad boy of the north side. The time was when he would even play truant to go fishing. Now he can't even bear to look at the lake. Over there is a moron—or was one. He stopped growing mentally at 11 years of age. Thanks to the factory treatment he thinks now like a man 87 years old whose interest in the chorus is experiencing an Indian Summer. Again, before us is a genius who, with a cigar box, four spools and as many nails, constructed a toy cart good enough for anyone. His folks used to call him an idiot. The impression brought away by the visitor is that this new, applied, capitalized, commercialized psychology is going to make the world all over. Soon there will be no human scrubs. In time defectives will be turned over to the city psychiatrists and be entirely reassembled. The visitors have lost time themselves in sending the gladsome news out into the marvelling world.

Yet we don't know. There is a familiar sound about these high promises. Grandfather used to read much the same things out loud from the inner corners of the newspapers and say that he just must get that medicine, the testimonials were so entrancing. That was a great many years ago. Still, for all the wonderful discoveries that in those days were put within the reach of all for only $1.00 a bottle or a case of a dozen bottles for ten dollars, humanity hasn't been revised, restored, refurnished to the likeness of giants, physical and mental. The Chicago psychiatrists use different methods than did the old quacks, but their language is a good deal the same.

It is our notion, possibly mistaken, that when science conquers the problem of wayward and imperfect mentality, it will speak with the tongue of the responsible physician and not that of the circus ground medicine man.

I have not been able to secure a copy of the *Detroit Journal* of January 2, 1922, in which the above paragraphs that appeared in the *Illinois Medical Journal* of March are said to have appeared, so I cannot be sure that the quotation is accurate, but if it is, here would seem to be what at first analysis is a pretty harsh criticism of occupational therapy. I understand that some of our occupational teachers have been a good deal troubled by the apparent unfairness of the attack. Instead of producing such an effect, however, the criticism should make us very thoughtful. It should make us realize the possibility of being misunderstood by conservative medical men, and careful above all else to avoid for our system of prescribed occupations any claims which can by the widest stretch of the imagination be considered extravagant or unfounded.

Those who are using occupational therapy wisely do not, I believe, claim that it cures anything, ever has or ever will. They do not point to the "prize bad boy of the north side" and say that occupational therapy has given him a Sunday School disposition, but they do know that he is better off just as any boy is better off when his attention is diverted from natural mischievousness and his energies are turned into channels of some simple constructive work which is within his compass, and which may lead to other desirable developments. We do not point to the idiot with his four spools and a cigar box and claim that he is now a normal man, but we do maintain, and have a right to, that the idiot occupied in any constructive way is better off than the idle idiot. And we feel justified in assuming that the demented patient, who is quietly tearing rags which later he will make into a rug or carpet for the hospital is in a somewhat better case than he was when, with appreciatively greater violence, he was tearing his own clothes and other perfectly good property.

In the time of the long and depressing convalescence of the tuberculous, we know that the cheerful and hopeful attitude of intelligently occupied patients is a positive aid to recovery, even if it does no more than keep the patient from worrying his heart out while he is taking the cure. We know that in the orthopedic and industrial accident field, occupational therapy sometimes restores function quite promptly when massage, electricity and hydrotherapy have failed.

No, we do not claim cures. We are quite content when cure is effected to give full credit to Dame Nature and to all of the medical, surgical and nursing factors which have contributed to the desirable result. But almost any responsible physician, who has seen the workings of occupational therapy in his wards, will be only too glad to admit that contentment and objectiveness of his patients is a very desirable background for treatment of any kind, and that here and there a patient, who would probably have fallen into complete invalidism and dependence, has been roused to a self-confidence and ability to sustain effort through these simple means.

Occupational therapy is an important link in the modern system of rehabilitation. It takes the patient at a critical time and gives him a lift in the right direction.

It may not infrequently transform the life and habits of people, who without some such encouragement to use their faculties, would never have used them at all. How much more can be said fairly or wisely for any therapeutic agent. If anyone had been making extravagant and unfounded claims for occupational therapy, it is to be hoped he will curb his enthusiasm and be content to plod along accomplishing results which will at last be recognized and appreciated by the most conservative.

On the other hand, it is to be hoped that all medical men will come to realize, as many do now, that we are not attempting to reform the world, but only to make it a little more practical and bearable for those whose energies are misdirected or who have lost their initiative altogether and need to have it built up by such simple stages as fall within their weakened capacity. Even the cigar box and four spools may some day be looked upon not in ridicule but as symbolic of a small but appreciable progress.

It would seem that return to health may not be obtained at $1.00 per bottle, but the evidence is growing that return of function can hardly be brought about by the mere incarnation within four walls of our demented population even though the expense of such treatment runs into the high millions.—Herbert J. Hall, M. D.

THE AKRON COMMUNITY CHEST

By HENRY G. YEARICK, General Superintendent, City Hospital of Akron, Akron, Ohio.

About October 3, 1919, a committee composed of six of the leading citizens of Akron, Ohio met and outlined a constitution for the Community Chest. This was an outgrowth of the Community War Chest, the objects of the fund being to promote cooperation, economy and efficiency among the member organizations; and to simplify the raising of funds by providing a single agency through which solicitation, collection and distribution of funds might be made for all participating organizations of which they are at present fifteen. Each participating organization is entitled to two representatives on the general board, one of whom shall be a director or trustee of the organization, and the other an active social worker in the service of the organization, and no person shall represent more than one organization. This board of control consists of not less than twenty-four or more than thirty members, one-third of which may be executives.

City officials who are ex officio members of the board are the mayor, chief administrator, director of public health, director of social service, superintendent of schools and any such officers as the board shall designate. Not more than one-third of the members of the board of trustees are paid officials of organizations receiving appropriations from the federation or Community Chest. Officers are elected annually and consists of a president, vice-president, two additional vice-presidents, secretary and treasurer, all of whom must be members of the board.

Before each drive for the Community Chest, each participating organization is asked to prepare an estimate of its requirements for the ensuing year. The head of each institution is then asked to appear before a committee of the Community Chest, which committee is known as the budget or finance committee to discuss the needs of his institution. The committee thus has a definite idea of the sum to be raised in order to take care of all the fifteen organizations. In passing, it might be as well to state that the amount to be raised is also governed by general business conditions. The first year the Community Chest was organized $1,500,000 was raised, out of which four building appropriations were made, but last year a drive was made for only half a million which of course cut down the appropriation allowed the hospital very considerably, and while in 1920 we received $87,468.46 as our proportion of the Community Fund last year we only received $26,365. The numerous organizations which are entitled to a percentage of the Community Fund are: the Charity Organization Society, Catholic Service League, Jewish Charities, Union Mission, Salvation Army, Red Cross, Boy Scouts, Children's Hospital; Crittenden Home, East Akron Community Fund, Travellers' Aid, Y. M. C. A., Y. W. C. A.

On account of the serious financial stringency of the present time, the members of the Community Fund board thought it unwise to appeal for more than one-half million and consequently each social activity is considerably handicapped. At the same time, it is interesting to note that the Charity Organization Society which deals directly with the Relief situation was given 1.36% of the Community Fund in 1920, and in 1921 received 7.37% of the sum raised. Of course it is understood that the Community Fund participants are not able to solicit the public for funds, with the exception of the Salvation Army which has its Christmas Kettle, the Red Cross, its Field Day, the Childrens' Hospital, a charity ball once a year, and the Catholic and Jewish Denominations who give various social functions.

In the Community Fund drives, donors are allowed to earmark their gifts for any specific organization in which they are particularly interested, but if donations are given to institutions who participate in the Community Fund, such gifts are deducted from the amount received by the institution from the fund. The subscribers to the Community Fund are given one year in which to pay their donations which are divided according to the most convenient manner in which they wish to make the payments, and the beneficiaries are paid one-twelfth each month of the amount granted them for the year. Each organization is asked to submit a yearly financial and social report, although it is the practice of the City Hospital to keep in close touch with the executives of the Community Fund by supplying them with details of current activities.

DISPENSARIES AND OUT-PATIENT DEPARTMENTS

Conducted by MICHAEL M. DAVIS, JR., Ph.D., Executive Secretary Committee on Dispensary Development, United Hospital Fund of New York, and Chief, Service Bureau on Dispensaries and Community Relations of Hospitals, American Hospital Association, 15 W. 43rd Street, New York
and by ALEC N. THOMSON, M.D., Director of Medical Activities, American Social Hygiene Association, 370 Seventh Avenue, New York

THE FIRST FIVE MONTHS OF THE CORNELL CLINIC*

BY WALTER L. NILES, M. D., DEAN, CORNELL UNIVERSITY MEDICAL COLLEGE, NEW YORK.

PRIOR to November, 1921, Cornell University Medical College conducted for many years as its teaching clinic, a dispensary in its building at Twenty-seventh street and First avenue, New York, and charged merely nominal fees to patients. On November 1, 1921, a new plan was put into operation whereby patients would pay a dollar a visit, with supplementary fees for special tests or services. The clinic continues to be the teaching clinic of the college, and is used, as formerly, for the diagnosis and the treatment of the sick and for the instruction of medical students. In changing the fees and altering the organization and administration in various details, the college has in mind two purposes:

1—To improve the facilities for instruction of students and for scientific research available to the students and faculty of the college.

2—To assist in reaching a large class of persons who, it is believed, exist in this community who can pay something for medical services but not the rates usually charged in private offices, particularly when the care of specialists or expensive diagnostic work is required.

A statement of this policy and the plan of the clinic was sent by the college to all members of the New York County Medical Society and was published in the February issue of THE MODERN HOSPITAL.

The opening of the clinic attracted attention from the public and the newspapers of the city to a degree not expected nor desired by the college. In consequence, the clinic was overwhelmed with applications. It had been determined in advance that the numbers admitted must be limited in proportion to the space available and the size of the medical staff, so that the quality of service could be maintained. The maintenance of this principle compelled the rejection of large numbers of applicants during the opening months and placed the medical and administrative staffs under great pressure.

During the first five months, the total attendance at the clinic was 43,899 including 18,803 different individuals admitted.

Attendance Increased Monthly

The attendance at the clinic has increased each month. Taking the figures for the average clinic session, the average number of visits (old and new patients together) were: November, 240; December, 287; January, 312; February, 321 and March, 336.

The attendance, classified by departments, during the five months, is as follows:

Medical	5,732	Nerve	1,661
Gastro-enterology	1,655	Urology	5,795
Endocrine	355	Gynecology	2,648
Health	136	Skin	5,916
Diagnostic	161	Eye	3,729
†Pediatrics	280	†Ear, nose and throat	6,584
†Diabetic	249	†Ear	2,159
†Protein Sensitization	409	Orthopedic	2,455
Surgery	1,994	Psychiatry	514
†Dentistry	450	†Therapeutics	552

†Certain clinics, such as protein sensitization, diabetics and therapeutics, were not begun until some time in January; it has been necessary to postpone the development of health examinations, owing to the pressure of other demands; pediatrics and dentistry are consultation clinics only. During February, the ear clinic was separated from the nose and throat, these clinics having been combined during the first three months.

Fully 90 per cent of the applicants came for a specialist's services, as shown by a study of 500 consecutive new cases visiting the clinic November 29 and following. Most of these were cases of long duration, only 13 per cent reporting illness of less than a month. Twenty-three per cent had had no previous medical care while 50 per cent had received treatment from private physicians. Of this latter group, reasons for change were given as expense, lack of improvement and dissatisfaction.

It is believed that the publicity attendant upon the opening of the clinic caused a number of obscure and chronic cases to come to the Cornell Clinic. A similar study of cases made a few months hence will probably show a smaller proportion of patients having a long period of previous treatment.

Standards Governing Admission

The policy governing the admission of patients to this clinic has been carefully worked out with the aid of the staff of the Committee on Dispensary Development of the United Hospital Fund. It may be summarized as follows:

The general policy regarding the admission of patients to the Cornell Clinic will be to accept patients who need service which they could not otherwise secure within their means, and refer other patients to private physicians, hospitals or free dispensaries. The relation of the patient's income and responsibilities (estimated on annual basis) to the cost of the needed service must be a basis for decision in acceptance. Patients about whom there is a doubt as to eligibility for admission may be accepted temporarily until further investigation can be made. The physicians of the staff of the clinic are requested to call to the attention of the clinic director any instances in which they think a mistake has been made by the admission department. Patients sent by a private physician with a letter will in general be accepted without question, although Cornell Clinic reserves the right to investigate, reject or refer such cases.

In order to refer to private physicians patients believed to be able to pay for such service, a list has been made up from the staff lists of selected hospitals and dispensaries, and each patient will be given the names of at least three physicians.

*This paper is the report of Dean Niles to the faculty and staff of Cornell University Clinic and covers the period between November 1, 1921, and March 31, 1922.

Method of Grouping

Applicants for treatment will be divided by the admitting officer into six groups, designated by letter and indicated on the patient's record.

(a) Patients believed to be regularly in the pay clinic group, as having an income which, after consideration of the size and the responsibilities of the family to which they belong, and their usual standard of living would not enable them to pay the fees ordinarily charged in private offices for specialist service, yet who have incomes sufficient to meet the rates charged at the pay clinic. Standards of income in relation to size of family are used as guides, to be applied after consideration of the conditions, needs and probable cost of treatment of each case.
(b) Patients with higher incomes, but temporarily in pay clinic group because of unemployment, previous illness or financial emergency.
(c) Temporarily in pay clinic group because of unusual expense of diagnosis or treatment needed. (Both the "b" and "c" groups are admitted for current diseases only.)
(d) Unable to pay clinic fees (income below group "a").
(e) Able to pay fees of private physicians.
(f) Admission for a single examination, decision suspended, pending information of condition.

In administering this policy, trained registrars have been employed, in addition to necessary clerks and a desk for controlling the admissions each day in proportion to the number of patients that can be received in each clinic with the staff available.

The classification made by the registrars will be of interest. The following shows the grading made on the scale above named for the months of January, February and March, 1922:

A	B	C	D	E	F	*N.R.
3,782	144	31	1,048	87	276	127

*"N.R." means that no record was made of the social classification. The number of such cases being from over 20 per cent of the total registration in December, to 8 per cent in January, 2 per cent in February and 2 per cent in March.

These figures show the number of persons who are believed too poor to be able to pay the clinic fees (the "D" group) is quite large—much larger than those (the "E" group) who are able to pay private office rates. Experience shows that it is generally wasteful to admit patients who, though able to pay for their first visit, are not able to pay the fees, including medicines, laboratory tests, x-rays, etc., which would be required for the completion of a course of treatment. Such patients properly belong in the clinics treating patients for nominal fees or free, and to those clinics such patients are referred.

It is, however, the policy of the Cornell Clinic to accept all emergency cases, to continue the treatment of such as had been carried before November 1, 1921, and whose treatment was then uncompleted, and to give service at reduced fees or free, whenever requirements of medical teaching or research so indicate.

In this connection it should be said that the Cornell Clinic has continued to be the teaching clinic of the medical college. Teaching is continued without difficulty, and indeed the aim of the college to improve the material available for the instruction of students has thus far been achieved.

Patients Honest About Finances

For the purpose of judging the efficiency with which the admission system was conducted, a special study was made in the latter part of February, and a run of eighty cases was visited in their homes.

One case out of the eighty, after the home visit, was believed to be able to pay a private physician and was unsuitable for admission. On the other hand, over 25 per cent of the cases were judged, as the result of the home visit, to be less well off than the registrar had judged them at the admission desk, and most of the 25 per cent were believed to be in class "D", namely, persons not able to pay the Cornell Clinic fees and therefore best treated at a free clinic. So far as the efficiency of the registration can be estimated from eighty cases, the figures just quoted obviously give a favorable judgment.

As to finances, the income from patients during the first five months taken together, was $65,946.26, and the expenditures, not including additional equipment, changes in building, etc., were $83,011,77.

It will be observed that a considerable deficit has been incurred. In addition, there has been expended $20,204.88 for equipment, alterations in building, etc. The deficit of current income under the expenditure is diminishing monthly as the attendance at the clinic grows, and it is probable that in the near future the deficit will be wiped out, not, however, including the overhead expense of the college administration, which is not charged against the clinic.

The Committee on Dispensary Development of the United Hospital Fund has agreed to meet the deficit during the initial period of the clinic in excess of the former deficit of the dispensary as maintained by Cornell on the old basis; and a fund for re-equipment was also provided by the committee.

The fee rates may be of some interest. The general admission fee is $1.00. In the medical clinic, for example, this includes a thorough general physical examination and the usual routine laboratory tests.

A schedule of fees for laboratory tests, x-rays, prescriptions, operations, etc., has been prepared and briefly summarized, as follows:

Prescriptions (except expensive medicines)	$ .25
Laboratory tests	.50 to 5.00
X-rays	2.50 to 12.50
(Complete gastro-intestinal tract $25)	
Minor operations	3.00 to 15.00

In the special diagnostic clinic (fee $10) which receives patients referred in writing by physicians, each patient is given a thorough general examination in the department of medicine with all necessary examinations and consultations with other departments and a considerable amount of routine laboratory work. X-ray and laboratory work beyond the regular routine are extra. A written report is rendered the referring physician. No patients thus referred are given treatment, except at the request of the referring physicians.

Since November 1, 397 physicians have referred patients to the clinic, 645 individual patients being thus referred. Of these 645 patients, about two-thirds have been referred for diagnosis only, the remainder for treatment.

Organization of the Clinic

The clinic is in charge of a committee of the faculty headed by the dean. An executive officer, or clinic director, has immediate direction of the administration. At the close of February, there were 110 physicians on the active medical staff of the clinic, counting all departments, and 78 persons on the non-medical roll, including therein the registrars, clinic executives, nurses, historian, pharmacist, technicians, clerks, orderlies, cleaners, etc.

The medical teaching schedule brings to the clinic the senior faculty of the college but the clinic chiefs and a considerable number of the assistants are also members of the teaching staff. In working out the organization certain aims have been held clearly in view. It is the endeavor to give a high level of service to patients, to provide a medical staff adequate in numbers and to adjust the number of patients admitted in each department to the staff so as to enable individual attention to be given to each patient. A second important principle is the provision of sufficient non-medical assistance so that the time of the physician shall be conserved for strictly medical work. This includes nurses, clerks, tech-

nicians and executive assistants, all trained persons, for the detailed clinic management and social service. As a third principle, it is the endeavor so to adjust the relations of the different departments as to promote team play and the coordinated study of the patient as a whole. There is a central record system, all the data regarding each patient from the various departments being filed in one folder and properly indexed.

It is the aim to provide the physician with sufficient knowledge regarding the personality and home environment of each patient to enable medical advice to be adapted to the individual needs and to develop adequate methods for follow-up and for the study of end results.

The clinic must be regarded as an experiment station in methods of efficient organized medical service. Its success and continuance will depend upon a maintenance of a high level of service to patients, conjointly with its contribution to medical education and to the advancement of medical science.

ASSOCIATED OUT-PATIENT CLINICS' BOARD HOLDS ANNUAL MEETING

On April 6 was held a meeting of the board of directors of the Associated Out-Patient Clinics of New York City for the purpose of electing officers, planning activities for the coming year, and discussing ways and means of promulgating standards which have been adopted by the various professional sections of the association.

The officers elected were as follows: President, Robert Olyphant; vice-president, Alexander Lambert, M. D.; secretary, Willis G. Nealley, M. D.; treasurer, John Sherman Hoyt. The following were chosen as members of the executive committee: Alexander Lambert, M. D., chairman; E. H. Lewinski-Corwin; Albert E. Lamb, M. D.; Charles F. Neergaard; William P. St. Lawrence, M. D.; Dudley Stetson, M. D.; S. H. Wadhams, M. D.

The Associated Out-Patient Clinics was organized in 1912 and until 1921, Dr. E. H. Lewinski-Corwin, the executive secretary of the public health committee of the Academy of Medicine, was the executive officer of the association. During this time a number of sections, including venereal disease, gynecology, pediatrics, internal medicine, surgery and neurology, were organized, and these adopted professional and administrative standards which were instrumental in improving dispensary work in these specialties.

During the war, because of lack of funds, the association was not active, but in 1921, when the committee on dispensary development was organized as a direct result of the study of dispensaries which was made by the public health committee of the Academy of Medicine, the activities of the association were renewed. Michael M. Davis, Jr., was chosen as executive secretary and Gertrude E. Sturges, M. D., assistant secretary. By mutual agreement, the Association of Tuberculosis Clinics, the Associated Cardiac Clinics and the Hospital Social Service Association are acting as the sections in these specialties. A section on ophthalmology was organized, and the Hospital Conference of New York City is acting as the section on administration.

The social service section has recently made a study and prepared a report giving a summary of the activities of the forty-five social service departments in New York City with constructive recommendation. With the section on venereal disease this group is now making a study of social service and follow-up in venereal disease clinics.

The recently organized section on Ophthalmology has made a study of the various policies with regard to admission, the charging of fees and the provision of glasses, equipment, professional methods and follow-up in the eye clinics of the city, and is formulating standards for eye clinics along these lines.

The section on administration is undertaking to simplify and improve statistical and financial methods for dispensaries.

The pediatric section which is being reorganized will bring up to date the standards for classifying pediatric clinics which were adopted by the section in 1914 and may cooperate with some local institution in operating an ideal pediatric clinic as a demonstration.

CLINICS SHOULD CATER TO GRADUATES OR PAID ASSISTANTS

There is no doubt that broadly speaking the medical practitioner takes very little advantage of the facilities available, despite the fact that he is encouraged by the clinics, says the latest report of the medical officer of health on the Venereal Disease Scheme of the London County Council. Practitioners usually complain of having too much to do as it is, and the medical student complains of an already overloaded program. In these circumstances, it is very doubtful whether any useful purpose can be served at present by stimulating the staff of venereal disease clinics to provide any greater facilities for the busy practitioner or medical student. There appear to be greater prospects of doing permanently useful work by concentrating upon those medical men and women who are willing and anxious to work in clinics for limited periods of time, either as paid clinical assistants or as post-graduate students; and, therefore, although no difficulty should be placed in the way of either the busy practitioners or medical students attending the venereal disease clinics when they can, the best course to adopt is to cater to those who will give up some weeks or months to the continuous study of the diagnosis and treatment of venereal diseases.

VALUE OF PLEASANT RELATIONS BETWEEN PATIENTS AND CLINIC PERSONNEL

Among the difficulties attending venereal disease clinics is the duplicity often practiced by the patients, says the recent report of the medical officer of health on the Venereal Disease Scheme of the London County Council. There have been instances when in-patients of a hospital, given several days a week off, used that time to go to the dispensary and request treatment there. They are in-patients in the hospital and at the same time out-patients of the clinic. Other patients have a tendency to change from one clinic to another, according to their whims or fancies. Some patients change because they take a personal dislike to some attendant or doctor; others, because the treatments are painful. These practices are a great hindrance to the clinic doctors. Doctors are not given any idea of the number of previous treatments the patient had. They have no idea of the procedure of the previous treatments, nor of the specific drug used. It is of the greatest importance, therefore, that the administration of the clinic be as smooth as possible, lessening the "rub" between patient and clinic personnel.

It is characteristic of science and progress that they continually open new fields to our vision.—Pasteur.

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MEETINGS, CONVENTIONS AND CONFERENCES

PRACTICAL HOSPITAL PROBLEMS TAKE ATTENTION OF OHIO ASSOCIATION

AN EFFORT to correlate the activities of the hospitals of Ohio with the other health and welfare agencies at work in the state, and illuminating discussions of several outstanding practical problems, including such diversified topics as the elimination of noise, efficient lighting, the state building code in its bearing on hospital construction, the relation of state associations to the national association and of hospitals to the medical profession, were highlights in the eighth annual meeting of the Ohio Hospital Association held at the Miami Hotel, Dayton, May 9-11.

Following a brief word of welcome by Dr. Knisely, one of Dayton's city commissioners, Dr. A. C. Bachmeyer, superintendent of the Cincinnati General Hospital, delivered his presidential address, in which he stated among other things that there is great need for a strong organization of the hospitals of the state and cited specifically the experience that the State Hospital Association has had in an attempt to reverse the decision of the Ohio Supreme Court in the Flower Hospital case. In this connection, he observed that since hospitals should be responsible institutions, patients entering them have the right to believe that they will receive good care. This of course is dependent upon the hospital exercising diligence in the selection of competent employes. He made a plea for the employment of a higher type of hospital employe, despite the fact that in doing so the hospital would have to enter into direct competition with industry.

Dr. Bachmeyer stated that the future might see schools of nursing placed in the same relation to hospitals as are schools of medicine today, and that then the student nurse would enter the wards only for bedside instruction, demonstration and observation and would not be responsible for the nursing care of the patient.

A plea was made by Dr. Bachmeyer for more careful attention to accurate recording of the examinations, diagnoses, care and treatment given patients because these records are needed, first, for purposes of study and education, and, second, for purposes of later treatment. While a large number of hospitals are using data for purposes of analysis in their staff meetings, comparatively little use is being made of this data for the benefit of medicine and the public in general, chiefly due to the lack of a uniform nomenclature and classification of diseases. He called attention to the report of the Committee on Records and Forms of the American Hospital Association and urged its more careful study and the adoption of its recommendations in order that through uniformity of methods the compilation of various hospital statistics may be made possible, and that by study and analysis of such statistics, individual hospitals may benefit to the fullest extent.

He recommended that a committee be appointed to study the practice of other states in the matter of including in the cost of service by state industrial commissions an evaluation of "contributed service."

He called attention to the laws and regulations which have been established in certain states governing the sale of clinical thermometers, and suggested that similar laws might be enacted in Ohio, thereby eliminating the state as a dumping ground for poor thermometers.

Dr. Bachmeyer touched upon the problem of uncollectible patients' accounts and recommended that the next legislative committee be instructed to address the state assembly in an endeavor to have a law enacted providing for the better protection of hospitals. He suggested further that a committee be formed to meet with similar committees of allied institutions to consider the important question of making changes in the curriculum of nursing schools and in their methods of education.

He urged further that the present State Bureau of Hospitals serve not only as a supervisory agent but as a bureau of information for the hospitals of the state, similar in scope to one recently organized in New York City.

Dr. Bachmeyer's address was followed by a paper on the program of the American Hospital Association read by Dr. A. R. Warner, executive secretary of the American Hospital Association, published on page 537 of this issue.

In his secretary's report, Mr. Frank E. Chapman stated that during the year an effort had been made to stimulate a more representative membership in the association, to work out a scheme under which the Ohio State Industrial Commission's service at cost plan would be modified to include in the cost of service an evaluation of "contributed service," thus further benefiting certain institutions, and to assist the Flower Hospital to sustain the ruling of the Appellate Court. Mr. Chapman made a plea for cooperation in establishing the status of hospitals of the state on a firm basis and urged that the principle of licensing hospitals be established on the ground that if health is fundamental to our government, the hospitals are agents of that government and should therefore be licensed by the state.

The remainder of the afternoon's session was devoted

Adv. page 46

Eminent Authorities Find Great Value in Use of Gelatine in Milk for Infants and Adults

JACOBI in his papers on "The Intestinal Diseases of Infancy and Early Childhood," advocated as early as 1899 the addition of gelatine to cow's milk for infants and adults. While at that time the reason for the result was not exactly understood, the benefits obtained were clearly established.

Herter in his papers on "Infantilism from Chronic Intestinal Infection" further finds that the addition of gelatine to the milk, in cases of serious malnutrition, to be highly beneficial because of the much greater absorption of the milk.

Moore and Kromholz found the addition of gelatine to milk was of the greatest value in preventing digestive disorders from the non-emulsification of the fat masses.

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> Soften one teaspoonful Knox Sparkling Gelatine in one-fourth cup cold milk; add one-fourth cup hot milk and stir until dissolved. Then add one and one-half cups cold milk. Chill, or use hot.
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to a round table discussion of dietary, housekeeping and laundry problems lead by Dr. Bachmeyer. Prior to the actual round table Miss Esther Funnell read a brief paper on how dietitians may contribute to hospital economy.

With reference to the best method of preserving battleship linoleum, Dr. Crew, who conducted a number of experiments on this problem, felt that the best method was to scrub the linoleum once every two months with a scrubbing machine, thereby removing all of the accumulated wax and dirt, and then apply a coat of wax, polishing it with the machine for scrubbing, which in his case has a polishing attachment.

In discussing the question of a control of linen to eliminate shortage by loss or theft, one of the delegates contended that the time consumed in many institutions in keeping a count of the linen was more expensive than the actual loss of the linen itself.

Ohio's Care of Crippled Children

"The Problem of the Crippled Child in Ohio" and "The Hospital and the Medical Profession" were the subjects of two interesting addresses delivered at Tuesday evening's session. Speaking on the former subject Mr. Edgar F. Allen, president of the Ohio Society for Crippled Children, asserted that in the state of Ohio, which has a population of about 6,000,000, there are 15,000 crippled children on whose bodies are registered the tragedies of nature and accident, or a ratio of two and one-half children to every 1,000 of the population. Of these 15,000 children the parents of ninety per cent cannot afford to pay for the necessary surgical treatment; fifty per cent might be cured and twenty-five per cent, improved.

Mr. Allen traced the legislation enacted in Ohio from 1901, looking toward the establishment of a central state institution for the care and treatment of crippled children near Columbus, down to the time when the movement for the better care of the crippled children of the state was hitched to the Rotarian organization. Largely through the efforts of this body of men, the state legislature passed two bills last fall, one of which deals with the care and cure of crippled children; the other, with their education. This movement, started in Ohio, has spread rapidly and has resulted in the organization of an international society for the care and treatment of crippled children, made up of members of the Rotary clubs. Nine orthopedic centers have been established in Ohio; these are supplemented by the orthopedic departments of twenty-one hospitals; but the professional work is retarded by the lack of an adequate number of competent orthopedists. The speaker made a plea for the establishment of a larger number of convalescent homes, calling attention to the greater economy that could be effected and the greater number of children that could receive active surgical treatment, did these auxiliary institutions exist.

In discussing the subject of the hospital and the medical profession, Dr. C. D. Selby, chairman of the Ohio committee on hospitals of the American Medical Association, traced the change of the public's conception of the hospital from the time when it was generally regarded as a place of last resort when desperately ill, through the period when it was looked upon as a surgical boarding house, up to the present when it is recognized as an establishment whose work is based on scientific research as applied to the care and treatment of disease. Dr. Selby characterized the present situation, in which the physician sends his patient to the hospital and, on the basis of the findings of various examinations and tests in which the hospital cooperates, makes his diagnosis and indicates the treatment the hospital is to apply, as strangely anomalous and markedly different from the situation existing, for example, in the service stations of an automobile concern, where the mechanics who make the diagnosis and employ the remedy are all employed on full time by the owner of the service station. This complicated situation involves the solution of a number of vexatious problems. In Dr. Selby's opinion the nearest approach to their solution lies in the minimum standards of the American College of Surgeons.

Touching on the intern question Dr. Selby said that small and inadequately staffed hospitals cannot expect to get interns on an educational basis but must pay for their services. He suggested further that the time may soon come when hospitals will accept physicians on their staffs as specialists only upon presentation of certificates of proficiency in their specialties granted by an authoritative body on the basis of training, experience and demonstrated ability. He also suggested the desirability of hospitals establishing "continuation schools" which would offer physicians the opportunity to bring their medical knowledge up to date and increase their skill.

Pay Tribute to Dayton Manufacturer

Wednesday morning's session, scheduled to run until twelve noon, was brought to a close at eleven o'clock sharp as a tribute to Mr. John H. Patterson, president of the National Cash Register Company, who died on Monday, May 8. As is well known, Mr. Patterson's life and work were closely intertwined with the industrial development of Dayton, and with many of its philanthropic activities, and it was felt that the association might fittingly join various other organizations of the city in paying his memory this slight tribute.

The two papers read at this session were part of a symposium on building and equipment and related to the Ohio building code in its relation to hospital construction and to the noise problem in the hospital. Mr. Charles Owsley, an architect of Youngstown, led the former discussion. He reviewed the various provisions of the code and called the convention's attention to the well-considered recommendations of Mr. Ira H. Wilson, consultant of the National Board of Fire Underwriters, that hospital buildings, except when only story in height, should be divided into compartments of suitable size by solid masonry walls except for fire doors in each story, and that basements and other areas of special fire hazard should be protected by automatic sprinklers. Mr. Chapman suggested that a committee of the association be appointed to go into the subject of the state building code and have it redrafted, so far as hospitals were concerned, on a national scientific basis.

Tells Methods of Noise Elimination

Mr. Ray Parsons delivered a most illuminating address on "The Noise Problem in Hospitals" in which he dwelt on two aspects of the question: the noise produced in rooms and the noise transmitted through walls, ceilings and floors. The evolution of building materials resulting in the general use of non-porous, non-flexible materials created the problem; it must be met by the installation of porous and flexible materials, which break up the sound waves and put them to rout by transforming their energy into heat. One way of doing this is by the installation on the ceilings of existing hospitals of a refined type of hairfelt, a concentrated absorbent, which absorbs about fifty-three per cent of the sound waves; or by the use in new constructions of a specially constructed sound-absorbing stone.

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JELL-O

"America's Most Famous Dessert"

Domestic Size
makes one pint

Institutional Size
makes one gallon

WHAT JELL-O IS

IT is no longer necessary in our copy to tell you how convenient, how easy to make, how inexpensive, and how downright good Jell-O is. Everybody seems to know that. So we are going to set down a table here to show how near Jell-O is like the natural fruit Jelly that you make in your own home.

Jell-O		Fruit Jelly	
Sugar	Vegetable Color	Sugar	Fruit Color
Water	Fruit Flavor	Water	Fruit Flavor
Fruit Acid	Gelatine	Fruit Acid	Pectin

You will notice by this table that the great difference is that Jell-O contains gelatine while ordinary jelly contains pectin.

Pectin is a substance contained in fruit juice. It is the element that causes the juice to "jell" when it has been cooked long enough. No particular claims are made for it as a food.

Gelatine, on the other hand, causes Jell-O to "jell" and is besides a valuable food element. Its importance is indicated by its extensive use in hospitals and in the diet lists prescribed for almost all conditions.

If you are particularly interested in these ingredients we suggest you write us for our complete Food Folder.

Yet Jell-O does not pretend to be a substitute for a fruit jelly. It is not so sweet but that children may eat all they care for. The amount of fruit acid (from grapes) is just enough to be palatable. The colors and flavors are so nicely balanced and measured that it is always beautiful to look at and delightful to the taste. Best of all *you'll like Jell-O after you have eaten it.*

The Genesee Pure Food Company
Two Factories
LeRoy N. Y. *Bridgeburg, Ont.*

Mr. Parsons suggested that, in hospitals, executive offices, corridors, diet kitchens, utility rooms, nurseries, children rooms, dining rooms, open wards and private rooms when located on car lines, should be acoustically treated. Operating rooms should not be so treated as surgeons often need to detect slight sounds which cannot be heard in treated rooms.

While only a beginning has been made in the acoustical treatment of hospitals, much has been done in the treatment of business offices, banks and manufacturing concerns. If this treatment is found desirable and profitable for commercial and industrial concerns, how much more desirable it is to eliminate noise when the body is sick, the nerves racked and the mind distraught.

At 11:45 a. m. the delegates repaired to the Miami Valley Hospital of which Dr. E. R. Crew is superintendent, where they were shown about the institution and later served with an appetizing luncheon in the spacious dining room of the nurses' home.

Discusses Hospital Lighting Systems

The first paper of Wednesday afternoon was read by Mr. Walter Sturrock, a lighting engineer of Cleveland. His subject was "Efficient Lights and Lighting." Mr. Sturrock called attention to the lamentably small number of hospitals that have modern lighting systems, as brought out by a survey of one hundred hospitals in New York and its vicinity; described the different types of lighting, and the types of light adapted to the various departments of the hospitals. For the wards, Mr. Sturrock recommended a soft, comfortable general illumination, local lighting for each bed, and an all-night system of low illumination. For the first, a totally indirect or semi-indirect lighting fixture should be used and the ceiling should be painted with a light cream color. For the second, there should be wall brackets between two beds, with equipment for extra lights. For the third, a low wattage lamp should be installed in the floor or not over twelve to fourteen inches above the floor level in the side wall. There should also be special outlets for the nurses' desks and for medicine closets. A daylight lamp is desirable in the laboratories for the examination of slides and specimens. This same lamp can be used to advantage for general illumination, for the x-ray examination boxes and for the stereoscopes.

In the discussion of Mr. Sturrock's paper, attention was called to the importance of group circuits for economy in lighting. It was also pointed out that Mazda lamps are manufactured to burn at rated voltage for 1,000 burning hours, and that if they are burned at an overvoltage they will not last as long.

Flat vs. Semi-Gloss Paints

Mr. Edgar W. Fasig of Dayton discussed the problem of paints and color effects and pointed out that while semi-gloss paints are easy to clean, flat wall paints have an advantage that offsets this in that they give a soft, uniform reflection. He urged that, even where the walls are painted with a semi-gloss paint, either in whole or part way up from the floor, all ceilings should be done in flat paints. Mr. Fasig said that although some experiments have been made with monochromatic colors to determine their physical and psychological effects, the results have been vague and doubtful. He said that despite common impression there was no occasion to fear poison from freshly painted rooms where the ventilation was adequate. The bronze liquids used in painting radiators, he observed, reduce radiation by 24 to 27 per cent and he recommended that a cold gray paint be used for this purpose. The heat will soften this color and the result will be a pleasing effect. This coat of paint strangely enough can be applied over the bronze and will restore the lost radiation.

The remainder of this session was devoted to a round table on administration, conducted by Mr. M. R. Pratt of the Aultman Hospital of Canton, Ohio. The question of granting vacations with pay to employes who leave the hospital's service after a year's tenure was raised. Several delegates regarded vacations in the light of a period for rest and recreation intended to fit the employ for his or her future work, and did not feel justified in granting them vacations with pay if they left at the end of a year. The whole question of vacations, sick leave and leave of absence was referred to the executive committee of the association for consideration and report at the association's next meeting. In the matter of sickness among employes, Dr. Crew said that his hospital continued the salary for two weeks, irrespective of the length of the employe's service or the character of the illness.

In discussing the matter of fire drills, Dr. Crew discussed his method of training nurses in the art of moving bed patients in the event of fire. He urged hospitals in case of fire, however small, to send in an alarm quickly and not to wait to see if the fire would spread. He also urged hospitals to arrange some specified place for the nurses to report in order to determine whether all are accounted for. In his plan each nurse is responsible for seeing that the nurse on either side of her room is up and aware of the fire.

Survey Use of Hospitals by Osteopaths

On the admission of osteopaths to practice in general hospitals, Dr. Crew said that out of 153 replies to a questionnaire on this subject, three hospitals said that they admitted osteopaths to have primary care, three or four admitted as consultants and that the rest refused admission to osteopaths under any conditions.

Wednesday evening the delegates met at dinner in the roof garden of the Hotel Miami. At the conclusion of the meal they listened to a brief paper by Dr. R. G. Leland, chief of the bureau of hygiene of the state department of health, on "The Problems of the Hospitals from the Point of View of the State Department of Health" and to a most inspiring address by Mr. Kettering, the president of the General Motors Research Corporation, in which he dwelt on the general relation of chemistry to medicine and the work of the hospital.

The three papers largely local in character, read at the Thursday morning session, dealt with the problems of the hospital from the point of view of the Ohio Board of State Charities, the nurse examining board and the industrial commission. The first paper was read by Mr. Harry Howard, director of child care, Department of Public Welfare; the second by Miss Augusta M. Condit, chief examiner of the Nurse Examining Board, and the third by Dr. T. R. Fletcher, chief medical examiner, Industrial Commission of Ohio. The rest of this session was devoted to the reports of various committees and the election of officers.

In the face of a number of requests for membership in the association by the executives of various general health agencies, the committee on constitution and rules recommended that the control of the association remain in the hands of the superintendents. This recommendation was accepted by the association.

The membership committee reported that there was a registration at the meeting of 102, that the membership

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Sanitary Surfaces

With Johnson's Perfectone Undercoat and Enamel walls, ceiling, woodwork and equipment can be given a porcelain-like finish that will stand frequent washing with soap and water. Johnson's Enamel comes in satine white and soft tints which reflect light without objectionable glare. Color combinations that are cheery and restful may be obtained with this sanitary finish.

JOHNSON'S ENAMEL

Johnson's Perfectone Enamel is long in oil and gives an elastic, durable, non-porous finish. It will not fade, chip, check, crack or peel. Finish walls, trim and furniture with Johnson's Perfectone Undercoat and Johnson's Perfectone Enamel and you are sure of a perfect job because its smoothness and freedom from laps, brush marks and cracks, render it absolutely sanitary and germ-proof.

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Contains complete information concerning the proper method of finishing floors, walls, woodwork and furniture. Tells just what materials to use and how to apply them. Includes color card—gives covering capacities, etc.

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is in the hands of a corps of experts who give all questions on wood finishing prompt and careful attention. Do not hesitate to bring your interior finishing problems to us—there is no obligation whatever attached to this service.

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Please send me free and postpaid your book, "The Proper Treatment for Floors, Woodwork and Furniture."

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of the association represented 74 per cent of the hospital bed capacity of the state, but only 24 per cent of the hospitals themselves and that 160 superintendents of hospitals in Ohio who were nurses were not members of the association and that only seventeen hospital superintendents who had received nursing training were present at the meeting. In the opinion of the committee these figures seem to indicate that nurses who become superintendents of small hospitals continue to give prior emphasis to the nursing rather than administrative aspect of their position.

Through the adoption of the legislative committee's report the association went on record as approving the Hughes-Griswold Public Health law and recorded its opposition to any amendments that did not strengthen it. It also affirmed its belief that the public health work of the state would be strengthened by giving the commissioner of public health a longer tenure of office, and this change will be advocated by the association at the next meeting of the general assembly. The association also placed its stamp of approval upon Hospital Day.

The following officers were elected: president, Frank E. Chapman, director, Mount Sinai Hospital, Cleveland; first vice president, Sister Rose Alexius, second vice president, superintendent, Good Samaritan Hospital, Cincinnati; Miss Jessie Herald, treasurer, superintendent, University Homeopathic Hospital, Columbus; Dr. E. R. Crew, superintendent, Miami Valley Hospital, Dayton; trustee for five years, Dr. A. C. Bachmeyer, superintendent, Cincinnati General Hospital; trustee for two years, Miss Mary E. Yager, superintendent, Maternity Hospital, Toledo.

INDIANA SECTION HOLDS FIRST ANNUAL MEETING

FIFTY hospital administrators attended the first annual meeting of the Indiana Section of the American Hospital Association which was held at the Lincoln Hotel in Indianapolis on April 19. Eight addresses, all of merit, were heard at the day's program and were followed by free discussion.

Officers elected for the year 1922-1923 are as follows: President, Dr. C. S. Woods, Indianapolis; first vice-president, Miss Harriet Jones, Bloomington; second vice-president, Miss Bernetha Smith, Muncie; secretary, Miss Anna Medendorpf, Lafayette; treasurer, Mrs. Ethel Clarke, Indianapolis; trustee, Miss Edith M. Willis, Vincennes. The officers will decide upon the time and place of the next annual session.

President George F. Keiper, M. D., called the meeting to order at 9 a. m., and following the invocation by the Rev. Virgil E. Rohrer of the Meridian Street Methodist Church of Indianapolis, reports of various officers and committees were heard.

The president's address was followed by papers by Dr. A. C. Arnett of Lafayette; Miss Mary J. Davis, dietitian at City Hospital, Indianapolis; Mrs. Ethel P. Clarke of Indianapolis; Dr. J. H. Warnel, Methodist Hospital, Indianapolis; Dr. Charles N. Combs, Union Hospital, Terre Haute; Miss Talitha Gerlach, Robert Long Hospital, Indianapolis; and Miss Mary C. Wheeler, Cook County Hospital, Chicago. A dinner was held at the hotel that evening.

Recommends New Legislation

In his presidential address, Dr. George B. Keiper made three recommendations to the convention concerning needed legislation. He favors a law which will place hospitals on the same basis as hotels in the collection of bills. He urged the revising of the Indiana Workmen's Compensation Act so that hospitals of the state may receive compensation for more than sixty days' attention to the injured. He recommended that the convention seek legislation which will put Indiana hospitals on the same basis as educational institutions in regard to the collection of import duties on supplies. He thinks hospital supplies should come duty free both because the hospital is not run for profit and because it is really an educational institution since there is trained the nurses who take care of patients not cared for in the hospital.

"We need more hospitals," said Dr. Keiper in his observations on the needs in the field. "Seventy-five per cent of the physicians of our country have no hospital facilities available for the care of their sick and injured. This is especially true in Indiana. Whether the plan of erecting small county hospitals will solve the problem time must tell. However, it is my firm belief that the large hospital in the city under the control of a powerful church will function much better than the hospital in which politics is liable to be a dominating factor or the institutions controlled by an association whose influence is entirely local, financial and otherwise."

Grade Doctors on Record Keeping

Dr. Arnett in his address on "The Standardization of Records" declared that this constitutes the greatest problem in hospital work. In his opinion the records must be supervised and inspected daily to bring the doctors "to time" in keeping them up.

"It is essential that the hospital have a record room and librarian," said Dr. Arnett. "There must be an inspector of records who will grade them without fear or favor and report his findings to the staff at its monthly meeting. Each doctor should be graded and his grade report at the staff meeting. The inspector should also make suggestions for improvement.

"A record committee is also necessary before which all complaints are referred and which hears the case and renders its decision. The record of surgical operations should be made at the time of the operation. The report of the pathologists must be promptly forthcoming. The anesthetists makes up his report as the patient is under the anesthetic. The post-mortem report must be carefully made."

In the discussion which followed Dr. C. S. Woods of the Methodist Hospital, Indianapolis, brought out the importance of the chart from the medico-legal standpoint. Dr. Reser, inspector of records at the Home Hospital, Lafayette, spoke of the proneness of the doctor to procrastinate and of the methods employed by that hospital to obtain records of the patient's history and progress.

Equipment and Personnel Greatest Factors

"Methods of Serving Food to Patients" was the title of a paper read by Miss Mary J. Davis, dietitian of the Indianapolis City Hospital.

"Two essentials in establishing and maintaining good food service in connection with a hospital are an efficient dietetic department and excellent equipment. Neither are prohibitive, even to the smallest hospital, for the efficient employe proves indispensable in making the department profitable, and this cannot be done with second grade tools.

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Kitchen of the New Private Pavilion, Mount Sinai Hospital, New York City.

DUPARQUET equipment is built on a foundation of quality and durability to withstand long and hard service. It is not presumed that it will meet competition at the sacrifice of these essentials.

The minimum cost of upkeep justifies a preference in the first cost. This can be easily shown by a comparison in cases where equipment has been used constantly for more than a quarter of a century; for example, St. Luke's Hospital, New York City. Many other hospitals can be cited.

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The above view illustrates the Nurses' Serving Room.

The above view illustrates one of the dish washing rooms.

"The well patient who leaves us saying that his tray service and meals have been perfect proves a priceless advertisement and will be a big factor in making the hospital a success. Too many human beings 'live only to eat' and that can't be changed, but we can assist in the choice of foods eaten and have attractive methods of serving."

Social Training for Nurses

Every student in the nurses' training school should spend from four to six weeks in the social service department is the belief Mrs. Ethel P. Clarke of Indianapolis expressed in her address on "Social Service and Public Health Nursing for Student Nurses." During the time spent in this department the student should endeavor to forget, to a large degree, that she is a nurse and should give her entire time and thought to the social side of life.

"Cases for the student nurses should be carefully selected for her with reference to the type of problem they present and should bring her in touch with the various social organizations working in the city and state. Her work on these cases should be followed and guided but not to the extent that she has no opportunity to demonstrate her own initiative and resourcefulness.

"A number of cities have splendid public health nursing organizations and some of them have arranged to offer courses of six to nine weeks to senior student nurses with excellent results. The most successful method is usually for the association to have a teaching district with an office and demonstration room as a teaching center. This is the method followed in Indianapolis."

Maintaining the Small Laboratory

Some of the essentials for laboratories in small hospitals were treated by Mr. J. H. Warvel, pathologist of the Methodist Episcopal Hospital, Indianapolis, in his address before the convention.

"A routine urinalysis and a complete blood count should be made on each case admitted to the hospital," Dr. Warvel declared. Gastric and stool analysis must also be made in all laboratories. The Wassermann and other serological examinations as well as tissue examinations are quite essential to every well conducted laboratory; but it is often the case that a small hospital cannot afford a physician as laboratory director and this necessitates the sending of pathological tissues to some larger laboratory for diagnosis.

"A laboratory can be well equipped for $1,500 to $4,000, according to the amount and character of the work. It should be under the supervision of a graduate physician, especially trained and fitted for this class of work; he should give all his time to laboratory work. Young ladies make the best workers for routine work, because they are more careful and painstaking.

"Some institutions charge a flat laboratory rate for every case admitted in the hospital. This is hardly just to every patient as some have few tests and some many. Other institutions have a nominal laboratory fee for each case, and place an extra charge for the more complicated and time-consuming tests. This is a very good method. Still other institutions make the usual routine tests gratis and have an extra charge for the more intricate tests. This latter method has been adopted at the Methodist Hospital in Indianapolis."

Smaller hospitals should combine to employ a technician, if they cannot employ one alone, Dr. C. S. Woods declared in the open discussion which followed. Dr. Steme of Indianapolis, in a few words, looked into the future when the laboratory may extend to all departments of the hospital, including social service, dietetics, etc.

At the hospital in Lafayette, said Miss Anna Medendorpf, the laboratory is in charge of a physician and a woman assistant. They serve both hospitals in the morning, and in the afternoon serve all the physicians of the city in their office downtown.

Miss Mary E. MacDonald of Elkhart described the methods used in the sixty-four bed hospitals there.

Dr. Ross of Richmond said that in the institution with which he is connected the laboratory fees vary with the ability of the patient to pay. One day's hospital fee is given over for laboratory work.

All agreed that it was best not to make a man in general practice the director of a laboratory. He should give his full time to laboratory work.

In her paper of follow-up work in the social service department, Miss Talitha Gerlach of the Robert Long Hospital, Indianapolis, discussed the subject from five angles: as an economy for the hospital; a means of efficiency for the hospital; a means of reinstating physically handicapped individuals in society; its research value to the hospital; and its value as a means of extending education in health matters.

Miss Mary C. Wheeler, head of the Illinois Training School for Nurses, Cook County Hospital, Chicago, spoke as a part of the afternoon program on "Financing Schools of Nursing."

Eliminating Waste in Training School

Miss Wheeler cited the following interesting figures to show the growth in the number of nursing schools:

Between 1873 and 1885 fourteen schools were established.

Between 1881 and 1901 103 schools were established.

Between 1891 and 1903 379 schools were established.

Between 1901 and 1910 599 schools were established.

"The first thing to do in running a school of nursing is to cut out waste," said Miss Wheeler. "Some of the wastes in education are: duplication of equipment; duplication of teaching; allowing students to enter who are below health, age and education qualifications; partly educating and discarding students; carrying too few from graduation to nursing service; turning out dissatisfied graduating students who keep away desirable material.

"Small hospitals, wherever it is possible, will find a much more enthusiastic group of student nurses if they can join together for a central training school. This will allow the students better instructors, greater competition and interest.

"Among the needs of the nursing schools today are standardization of class work and better selection of pupils so that fewer need be discarded."

"Surgical patients are often afraid to go to the hospital not because of the operation but because of the anesthetic," said Dr. Charles N. Coombs of Union Hospital, Terra Haute, in his paper on "The Relation of the Hospital to the Anesthesia Department."

"The anesthetist must be as well trained for his part in the operation as is the surgeon for his duties.

"The exploitation of the nurse anesthetist is dangerous. While the nurse knows the rules in anesthesia, she does not know the exceptions. The nurse has plenty to do without administering anesthetics. There are other worlds for her to conquer. It is a rule at Union Hospital that only a licensed physician or dentist may give the anesthetic."

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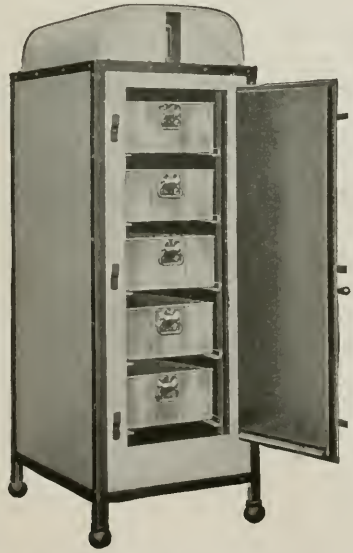
Why the Trescott Method of Cooking?

Here are some facts:

DO you know that when you cook corned beef you lose about 25% to 28% of it? Do you know that roast beef shrinks with ordinary cooking 20%—that beef rounds shrink 30%—ham 20%—also that when you cook your meats you harden the albumen and make your meats tougher than need be and the part that shrinks away is the most nourishing and tasty part of your meats? Also that



The Trescott Low Temperature Cooker

will save you on this shrinkage 8 to 10% on corned beef—15% on rounds—8 to 10% on ham?—also that The Trescott Cooker cooks at low temperatures in saturated air and therefore will cook your meats without hardening the albumen, leaving them as tender as possible and without shrinking the fibers, thus leaving the natural juices and nourishment in suspension within the meat?

There is no spoilage or burning, and a low cost of operation. Besides this, you have a cool kitchen, and cooker takes very little space. We manufacture equipment for cooking meats and for cooking vegetables.

Thousands of pounds of meats are cooked by this process daily. One large firm alone cooks over forty-eight thousand pounds daily by this process.

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CONNECTICUT EXECUTIVES HOLD QUARTERLY SESSION AT WATERBURY

The April conference of the Connecticut Hospital Association was held on April 29 at the Hotel Elton in Waterbury. Thirty-four representatives of the hospitals of the state were in attendance. The final meeting of the year is to be held at the Lawrence and Memorial Hospital in New London on June 3 at which time the election of officers will take place.

Reports of officers and committees took up the morning session of the April meeting. After a luncheon and round table discussion the meeting was adjourned and delegates inspected the new wing of St. Mary's Hospital and the addition to the nurses' home at Waterbury Hospital.

Questions for round table discussion, which stimulated much thought and discussion, concerned problems of nursing, accounting, dietaries, heat, light and power, fire insurance and protection, salaries and wages, hospital records and miscellaneous matters. Some of the questions of interest under the latter classification were: "What is the best property enclosure for a hospital, a fence, hedge or wall?" "Is it possible for a hospital of fifty beds to become an accredited hospital as required by the American College of Surgeons?" "What is the most ideal arrangement under which a hospital of 100 beds or less may conduct its x-ray and laboratory departments?"

The following hospitals of the state were represented at the meeting:

Allington, New Haven; Bridgeport, Bridgeport; Danbury, Danbury; Brace, New Haven; Hartford, Hartford; Lawrence and Memorial, New London; Middlesex, Middletown; Meriden, Meriden; New Britain, New Britain; New Haven, New Haven; Norwalk, Norwalk; St. Joseph's, Willimantic; Stamford, Stamford; Waterbury, Waterbury; Winsted, Winsted.

NATIONAL TUBERCULOSIS ASSOCIATION HAS SIGNIFICANT MEETING

The eighteenth annual meeting of the National Tuberculosis Association was held in Washington on May 4, 5 and 6. Approximately 800 delegates attended the meeting.

Significant statements were those made by Dr. Victor C. Vaughan, chairman of the National Research Council, and Dr. Livingston Farrand, president of Cornell University and president of the National Health Council. Dr. Vaughan stated that the death rate from tuberculosis has declined in the United States during the past thirty years from about twenty per 1,000 to thirteen, indicating a saving of approximately 700,000 lives per year at the present time. While it is impossible to say to what extent the death rate may be reduced, Dr. Vaughan believed that it should be possible to minimize it to seven. Dr. Farrand considered this figure to be a conservative one. Both Dr. Vaughan and Dr. Farrand believed that the greatest danger to the United States in the European situation today does not arise from the possibility of transmitting plagues and epidemics, though it has been estimated that there are about 20,000,000 typhus cases in Russia at the present time. The real danger to this country lies in the fact that the generation of Europeans—Austrians, Germans, Russians, Hungarians, etc.—is an under-fed and under-developed generation, and unless the world is interested in bringing these people up to normal standards mentally and physically, the next generation will be unfit to carry on the civilization of Europe. Dr. Farrand pointed out, however, that the signs of improvement in the health condition of the European nations are hopeful.

Secretary of State Hughes welcomed the delegates to the national capital. He stressed the need for early and correct diagnosis, segregation, supervision and proper means for adequate nursing as essential measures in the eradication of tuberculosis. "I do not suppose," he stated "that there is any field of human effort that has such promise as well as such possibilities as the field of effort that relates to the conservation of public health."

One of the most interesting features of the meeting was the Modern Health Crusade luncheon which was held at the City Club on May 4, at which Ambassador J. J. Jusserand of France, Dr. Sao-Ke Alfred Sze, Chinese minister to the United States, and Dr. Bedrich Stepanek, Czecho-Slovakian envoy, spoke of the Modern Health Crusade and public health work which is being conducted in their respective countries.

Dr. Herbert M. Rich in discussing the prevention and treatment of tuberculosis in childhood at the sociological section of the meeting stated that when a child becomes infected with the disease his vital tissues become at once the seat of a struggle between the forces of life and death and the ability to segregate such invading bacilli within the lymphatic glands is a measure of the individual's immunity. It is highly important, therefore, that every social worker realize this prolonged carrier stage of the tuberculous child, who may seem at a given time very well and strong. Any acute disease or prolonged nutritional defect or unhygienic surroundings may break down resistance and tuberculosis again becomes active. When a child recovers from measles or scarlet fever, he commonly obtains such immunity that he is free from the disease so long as he lives, but the apparent recovery from tuberculosis is now known to be only the beginning of "trench warfare."

Dr. William R. P. Emerson discussed the function of the "nutritional class" in the prevention of tuberculosis. He advocated the selection of malnourished children by means of weighing and measuring on the basis of clinically determined standards; cooperation with a well equipped diagnostic clinic; complete physical growth, mental and social examinations; the elimination of physical defects; modified school programs commensurate with the child's strength; home cooperation for securing proper rest periods and feeding; proper use of summer camps; and the proper placing of responsibility upon physician, nutrition worker and parents.

In discussing the place of the tuberculosis dispensary in industrial health work Mr. Godias J. Drolet, statistician of the New York Tuberculosis Association, stated that in the twelve years since 1910, tuberculosis has killed 71,271 victims of the male sex as against 41,097 of the female sex in New York City. The reason for this difference in the two sexes is to be found in the conditions under which they work and which break down resistance and cause the development of tuberculosis in adults.

An announcement was made at the meeting that a substantial part of the income from $10,000,000 for the next few years has been set aside by the Milbank Fund to demonstrate in several New York state districts how tuberculosis can be controlled in American communities. The announcement was made by Mr. John A. Kingsbury, secretary of the fund established by Mrs. Elizabeth Milbank Anderson of New York City. The demonstrations are to be in the nature of a memorial to Mrs. Anderson and are to be based upon the successful experience of the Framingham Health and Tuberculosis Demonstration con-

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Bread is baked in about 50 minutes. Grape-Nuts gets 20 hours of thorough baking. Is it any wonder Grape-Nuts is so digestible?

THE reason for baking any cereal food is to make it digest easier. The tough little envelopes surrounding the food cells are split open. The starch granules are broken up. Some of the starch, especially in the "crust," is converted into forms of sugar.

This explains why well-baked crust is so much sweeter than the inside, soft part of the bread.

Grape-Nuts, the rich cereal food, is baked longer than any other cereal food. With Grape-Nuts the baking process is continued for about 20 hours. So every single grain of this nutritious food is changed into "crust." A good deal of it is even converted into dextrose, the completely digested product of starch or sugar. Dextrose is the *only* form in which starch or sugar can be absorbed into the blood.

This explains why Grape-Nuts can be eaten and relished by many people who have most delicate digestion. And *why* it is so nourishing and wholesome.

Samples of Grape-Nuts, for individual and clinical test, will be sent on request to any physician who has not received them.

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Battle Creek, Michigan, U. S. A.

ducted for the last five years by the National Tuberculosis Association and the Home Hospital experiment conducted by the New York Association for Improving the Conditions of the Poor.

Dr. Charles J. Hatfield resigned as managing director of the association and Dr. Linsly R. Williams was appointed to succeed him. Dr. Hatfield will devote most of his time to local tuberculosis and health work. Dr. Williams was formerly deputy commissioner of health of New York State and for the last four years has served as director of the Rockefeller Commission on the Prevention of Tuberculosis in France.

The following officers were appointed for the coming year: Dr. Lawrason Brown, President; Dr. Charles J. Hatfield and Dr. J. W. Pettit, vice-presidents; Dr. George M. Kober, secretary; and Mr. Henry B. Platt, treasurer. The following directors were elected: Dr. J. H. Peck, Iowa; Dr. David R. Lyman, Connecticut; Dr. W. L. Dunn, North Carolina; Dr. A. M. Forster, Colorado; Mr. John A. Kingsbury, New York; and Dr. James Alexander Miller, New York.

PLANS TAKING SHAPE FOR CONVENTION OF CATHOLIC ASSOCIATION

Plans are rapidly taking final form for the 1922 convention of the Catholic Hospital Association of the United States and Canada which will be held in Washington, D. C. on June 20-23. A tentative program has been outlined by Secretary B. F. McGrath, M.D. and it will be in permanent form soon.

Lodging and board are to be provided for the clergy and the sisters in attendance at the Catholic University and Trinity College. A schedule of hotel rates for the benefit of doctors and nurses has been issued by the secretary's office in Milwaukee.

The annual meeting opens with a convention mass in the Franciscan church near the Catholic University, the sermon to be given by Archbishop Curley of Baltimore. Clinics will be held for doctors at various hospitals of the city and demonstrations, round tables and special conferences have been arranged for the benefit of all hospital workers.

Following the four-day session a sight-seeing trip has been arranged for those delegates who wish to see the city or visit Mt. Vernon. Others will visit the Walter Reed General Hospital to observe the work in rehabilitation there in progress.

The tentative program follows:

Tuesday, June 20
Morning Session

10:00 a.m.—Mass and sermon, Franciscan Church, sermon by Archbishop Curley, Baltimore.
11:30 a.m.—Opening of the convention. Addresses of welcome.
12:30 p.m.—Recess. Convention photograph.

Afternoon Session

2:00 p.m.—President's address.
2:30 p.m.—Symposium: Hospital Organization. Four papers and discussions.
4:00 p.m.—Adjournment.
7:30 p.m.—Meeting of the officers and directors of the various sectional conferences (state district, or provincial), Auditorium, Catholic University.

Wednesday, June 21
Morning Session

8:30 a.m.—Doctors' clinics, Providence Hospital.
10:00 a.m.—Conferences:
(1) Mothers, provincial and superior; superintendents; supervisors and instructors of training schools; heads of floors.
(2) Operating room nurses; anesthetists.
(3) Laboratory directors and technicians.
(4) Dietitians.
(5) Supervisors of records and their assistants.
(6) Hospital social service and dispensary workers.
(7) Doctors.
(8) Graduate nurses (not Sisters)
(9) Diocesan directors; chaplains; retreat masters; Sodality directors.
12:00 Noon—Recess.

Afternoon Session

2:00 p.m.—Conferences continued.
4:00 p.m.—Adjournment.
4:30 p.m.—Demonstrations in various phases of nursing, Providence Hospital.
The demonstrations will be given by Sisters from different sections of the country.
8:00 p.m.—Night meeting for doctors and nurses, Washington Hotel.

Thursday, June 22
Morning Session

8:30 a.m.—Doctors' clinics, Georgetown Hospital.
10:00 a.m.—Symposium: The Functions of the Hospital. Ten-minute talks by authorities on the various phases.
12:00 Noon—Recess.

Afternoon Session

2:00 p.m.—Business meeting.
Reports of officers and chairmen of permanent committees.
Election of officers for the year 1922-1923.
4:00 p.m.—Adjournment.
4:30 p.m.—Meeting of newly elected executive board.
4:30 p.m.—Demonstrations in various phases of nursing, Georgetown Hospital.
The demonstrations will be given by Sisters from different sections of the country.

Friday, June 23
Morning Session

10:00 a.m.—Reports of chairmen of the various convention conferences.
Reports of convention committees.
12:00 Noon—Convention adjourned.

Afternoon

Trip to Mount Vernon, sight seeing or visit to Walter Reed Hospital to observe rehabilitation work.

OKLAHOMA HOLDS ANNUAL SESSION

The Oklahoma State Hospital Association held its annual meeting on May 10 at the University Hospital in Oklahoma City. Following a luncheon a business session was held at which Dr. Fred Clinton of Tulsa was reelected president and Paul H. Fesler, superintendent of the University Hospital, was reelected executive secretary.

The question of applying for recognition as a geographical section of the American Hospital Association was brought upon the floor and after much discussion it was referred to a committee to be reported upon at a later meeting.

A public meeting was held in the evening at which Dr. Paul Magnuson of Chicago was the principal speaker.

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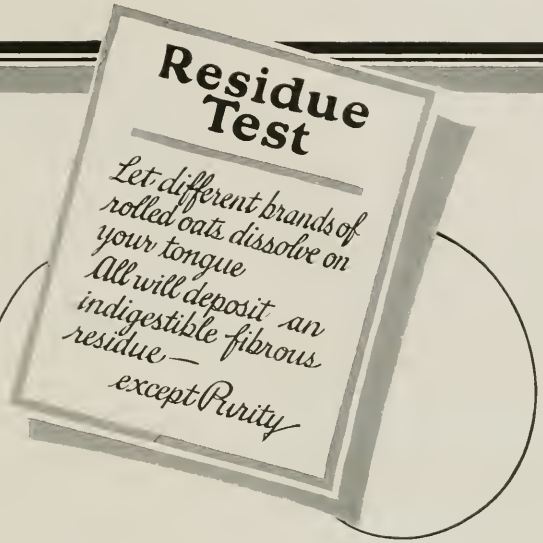
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Hints to Hospital Superintendents

A PREFACE TO AN ANNUAL REPORT

The Grace Hospital of Detroit prefaces its annual report with a statement "To The Reader" which strikes the right note. The typographical style of the statement is good as well as its contents; the statement is centered on a page with generous margins; it is printed in simple Roman type, rather than the showier and less legible Old English or italics; ample spacing has been made between paragraphs. The statement follows:

We want you to become familiar with the work of The Grace Hospital. If your circumstances are such that you are not able to contribute to the charity work of the hospital, you can at least do us the favor of reading herein about the work we are doing.

All objectionable medical and surgical statistics have been omitted and this little book is issued for the perusal of the general public.

This is a public institution and it belongs to the citizens of Detroit. In the fulfillment of its mission it is intended to serve you in time of sickness or accident. If you are unfortunate enough to need hospital care, the money that you pay will contribute towards the care of someone who is poorly provided with this world's goods.

We invite you to become interested in the hospital. The doors are open to the public any afternoon throughout the year and we welcome your visits, advice and counsel. If you are a citizen of Detroit, it is your hospital, even though you do not have a hand in its management or contribute to its several lines of charity work.

We solicit subscriptions for any department of our work. We can arrange for you to assist directly in one of the social departments of the hospital if you will indicate your willingness to be identified with some of our charities. The names of the trustees, officers and contributors are sufficient warrant for the wise use all funds that many be contributed.

THE CARE OF INSTRUMENTS

The following regulations in regard to the care of instruments are contained in the "Nurses' Notes for Reference in Operating Room Work" which has been compiled by Miss B. K. Felter, O.R., supervisor of nurses at the Royal Victoria Hospital, Montreal, Quebec:

"Instruments are boiled for five minutes in a 1 per cent solution of sodium carbonate. From the boiler they are transferred to an instrument table or stand after covering the same with sterile towels. During operations the instruments should be washed in a (1.5000) lysol solution which lubricates and prevents rusting. Knives and needles are boiled for one minute only. Instruments are placed in racks and kept dry.

"Syringes are washed in soap and water and stored ready for use in 80 per cent alcohol.

"After operations the instruments are washed in cold running water, then boiled in 1 per cent soda solution from five to twenty minutes. Then they are scrubbed with sapolio and ammonia, rinsed thoroughly in hot lysol, wiped dry and put away."

SOLICITING CRITICISM

Form letters soliciting criticism, either favorable or adverse, from patients on the day of their dismissal from the hospital are being more and more widely used by various administrators. The following mimeographed letter is sent by Dr. Walter E. List, superintendent of the Minneapolis General Hospital, to each patient:

"As your stay in the hospital terminates this day, I am glad that your doctor believes that you are now well enough again to enjoy the comforts outside of the hospital.

"Will you kindly give us an expression as to whether or not you were satisfied with the hospital treatment?"

Below the superintendent's signature is left a blank space for the patient's comment and a line for his name.

BORROWING FROM THE TEACHER

The superintendent who finds difficulty in keeping track of the number of patients in the house daily may well imitate the "school ma'am." Presbyterian Hospital, Chicago, employs with success the teacher's methods.

For each floor the hospital has large loose sheets ruled with thirty-one small squares for the days in the month. At the left margin are entered the patients' names and room numbers and the senior nurse on each floor marks a straight line for every one of her patients who is present that day. If the patient has been discharged there appears a D on the day of his departure. If he has been transferred he is marked T. (T, according to the system, represents transferred to and Tf, transferred from). At the bottom of each page is marked the total number of patients in the house, discharged and transferred.

The sheets from each floor are brought down to the girl at the information desk daily and she checks them up with the admission tickets to see that all names have been entered and that transfers and discharges have been properly made. This gives her the total number of patients in the house, and the floor totals and house total are placed on the superintendent's desk for reference.

Totals are also entered in a large book where each page represents a month so that anyone who desires may see in a moment the number of patients in the house at any day, any month, any year. Some interesting comparisons result. When the year is ended, the monthly totals need only to be summed up and this portion of the annual report is done.

"No mockery in the world is so hollow as the advice showered upon the sick."—Florence Nightingale.

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This is to invite you to become acquainted with them. Simply write us, or mail the coupon below, and a full size carton of each will be sent without charge.

Noted Gynecologists Helped Us

The formulae of these new preparations were developed under the personal direction of one of America's most noted gynecologists. Prominent baby specialists were, too, consulted, for we sought to attain the ideal. Now we believe we have succeeded.

Goes to the Fundamentals of Skin Prophylaxis

B & B Baby Talc protects by repelling moisture. It combats the moisture of perspiration, urine and stools. All physicians know how these agents work to produce erythemas, excoriations and even infectious lesions.

Acts as a Lubricant

By incorporating into B & B Baby Talc a proper proportion of zinc stearate along with other essentials, a powder is produced which neither abstracts the natural oils nor dries the skin.

Instead, it acts as a lubricant. It repels moisture much as olive oil does. Hence, the effects of keeping the skin coated with this protective coating are to prevent softening, or maceration, of the epidermis and friction or chafing from clothing—two prime requisites in keeping the skin smooth and intact.

B & B Baby Soap
"Tempered to the Infant's Skin"

A mother's zeal in keeping her baby sweet and clean, as every doctor knows, frequently finds expression in an unfortunate choice of soap. Usually she errs on the side of Castile—name under which countless soaps strong in caustics now masquerade.

B & B Soap is made of edible fat. It contains a slight percentage of zinc oxide, hence is mildly healing. Bland and soothing, it affords a safe soap for infant use. Obtainable by mothers at all druggists.

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By mailing it you will be conferring upon us much appreciated consideration. Full size cartons of both products will be sent postpaid, without charge. Offer limited to practicing physicians only.

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QUERIES AND ANSWERS

WOOD STAINS FOR LABORATORY TABLES

To the Editor of THE MODERN HOSPITAL:

I am very desirous of getting a formula for a permanent black dead dressing largely used for tops of laboratory tables, one of the ingredients of which is potassium permanganate. If you can furnish the formula and directions for applying, it will be greatly appreciated.

SURGEON IN CHARGE HOSPITAL.

Here are the formulæ of two acid-proof wood stains:

Solution No. 1.—125 grams of copper sulphate, 125 grams of potassium chlorate, 1,000 grams of water.

Solution No. 2.—150 grams of good fresh analin oil, 180 grams of concentrated hydrochloric acid, 1,000 grams of water.

The wood must be free from paint, varnish, grease or chemicals. Apply two coats of Solution No. 1, boiling hot, with paint brush, allowing the first coat to dry thoroughly before the next is applied. Then apply two coats of Solution No. 2 in the same way. When the wood is completely dried wash off excess chemicals with hot soapsuds. Finish with raw linseed oil. Polish comes from rubbing the oil down well with a cloth or sponge. Whenever the tables get dingy again go over them with a coat of linseed oil and rub smooth.

You can secure these solutions, if you so desire, from the Central Scientific Company, 460 East Ohio Street, Chicago, Ill.

OPERATING ROOM WALLS

To the Editor of THE MODERN HOSPITAL:

At a meeting of the Pennsylvania State Hospital Association held in Harrisburg recently, the question of the proper material for constructing the walls of operating rooms came up, and one of the editors of THE MODERN HOSPITAL was quoted as favoring plaster walls (Keene's cement), painted. The writer was under the impression that glazed tile was more sanitary and more durable. We are contemplating building new operating rooms within the next year or two, and I would, therefore, greatly appreciate an expression of your opinion on this subject.

HOSPITAL SUPERINTENDENT.

A hard plaster wall (Keene's cement), enamel painted, in perfect condition, presents a smooth, unbroken, washable surface and is perhaps the most sanitary wall finish for operating room purposes that can be obtained. Obviously, such a surface is much smoother than tile surface, broken or interrupted by rough cement joints.

One should not, however, advocate the use of plaster finish for operating room walls under all conditions. It is best not to make any hard and fast rule, because circumstances differ. In a small hospital with a single operating room the daily use of which is imperative, how troublesome it would be if the plaster cracked or the paint wore off, and the room could not be spared long enough to be renovated! In such a hospital the sensible thing to do is to use tile, either for the whole room or for the major portion of the walls (say seven feet high), so that the frequency of renovation will be diminished to the minimum, or so that renovation, when necessary, can be carried out with the least possible interruption of service. The same argument holds for a somewhat larger hospital, having two operating rooms and requiring their constant use.

As a rule, it is not wise to use plaster in a small operating room, where furniture must be placed close to or in actual contact with the wall; for it would soon be badly damaged. If an operating room is four feet wider in its length and breadth than the actual service requires (say 20 by 24 feet), the use of plaster is safer than in a smaller room. I recommend the use of tile more frequently than plaster, because the conditions call for it, but this does not in any way impair the statement that a hard finished plaster wall in perfect condition is the best wall obtainable.

S. S. GOLDWATER, M.D.

WAYS OF PROMOTING COOPERATION

To the Editor of THE MODERN HOSPITAL:

How can better relations and more cooperation be established between our hospitals and the medical profession?

A DOCTOR.

It should not be necessary to ask a question of this kind; however, it is unfortunate that in some instances we do not find the best cooperation between the medical profession and the hospital. The following are a few suggestions:

First, the hospital should offer the doctor an efficient service for the treatment of his patient.

Second, the entire hospital staff should manifest a keen interest in the patient's welfare.

Third, there should be conferences at regular intervals between the doctors and the hospital authorities. The attending doctor should be consulted in hospital matters, and also, the appointment of advisory committees for different phases of the work will develop a more constructive interest.

Fourth, a thorough understanding between the hospital authorities and the doctors, with a frank cooperative spirit will bring the best results to all concerned.

EIGHT HOUR DAY SYSTEM

To the Editor of THE MODERN HOSPITAL:

What is the best division of duty hours for nurses in order to establish an eight-hour day system?

SUPERINTENDENT.

The division into four groups as follows, has been found to be satisfactory:

Group No. 1: 7:00 a.m. to 7:00 p.m. with four hours off.
Group No. 2: 3:00 p.m. to 11:00 p.m.
Group No. 3: 7:00 p.m. to 7:00 a.m. with four hours off.

Adv. page 62

The very first and paramount requirement in the hospital, that of definite accuracy, is *all* the reason why The Johnson Pneumatic System of Temperature Regulation should be installed. The maintaining of proper and unvarying uniform temperature in the separate hospital rooms is too critically vital to be entrusted to anything less than the definite accuracy which The Johnson System insures. And the specific reasons for this are importantly worthy of inquiry, investigation, consideration.

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Book Reviews and Current Hospital Literature

THE AMERICAN ILLUSTRATED MEDICAL DICTIONARY

Edited by W. A. Newman Dorland, M. D., A new and complete dictionary of terms used in medicine, surgery, dentistry, pharmacy, chemistry, veterinary science, nursing, biology and kindred branches, with new and elaborate tables. Eleventh edition, revised and enlarged.[1]

There has come to our desk the new eleventh edition of the American Illustrated Medical Dictionary from the Saunders Press, resplendent in scarlet cover and boasting several noteworthy new features. The revised and enlarged edition bears the publisher's date of the current year and so will bring to the medical and allied professions, editors, librarians and the public the latest medical terminology. Fifteen hundred new terms, the majority of which have not been published in any other dictionary, are said to be defined in this latest edition by Dorland.

Included in the volume is the new terminology of the American Society of Bacteriologists, with all the new bacterial names explicitly defined. Another feature of the 1922 edition of this work is the practice of distinguishing by an appropriate sign the anatomical names of the B.N.A. terminology.

Particular attention has been paid the historical aspect of medical terms, and collateral information of an encylcopedic character supplements the definitions. The table of tests which forms an important part of the volume has been brought strictly up to date.

For convenience in handling, the new edition far surpasses earlier volumes. Although it contains twenty-eight or more additional pages than the previous edition, it is of slighter bulk by reason of the thin stock on which it is printed.

HEALTH AND EFFICIENCY

By John Daly McCarthy, M.A., Ph.D., In charge of Hygiene, DeWitt Clinton High School, New York.[2]

The idea, once generally held, that school books are of value in inverse proportion to their attractiveness to the pupil is losing repute. Nowadays it is conceivable that the humor of Hendrik Willem VanLoon might gain stealthy entry into the classroom and rob history of its dullness and solemnity.

It is with some of these modern notions that John Daly McCarthy in charge of hygiene work at DeWitt Clinton High School, New York, has written "Health and Efficiency," and it is not unthinkable that his little volume may make the school boy forget for a time that the pursuit of knowledge is a serious thing.

At the very frontispiece the author gives warning of his intentions. Pictured there is a robust youngster on skis leaping a frozen valley, flanked with snow-hung pine trees. This, with the brazen irreverence of a thorough modern, he has captioned "Efficiency."

Logically enough, the author treats his subject from three angles: personal hygiene, school and home hygiene, and community hygiene. Only the barest and most fundamental facts of anatomy and physiology find their way into "Health and Efficiency," a vitalized and simplified physiology.

Something of the general structure of the human body, the digestive apparatus and the organs of sense, Mr. McCarthy finds a sufficient foundation on which to base his instructions in the everyday experiences of hygienic living. The care of the body, not its structure, gets the emphasis, a field of infinitely greater consequence to the high school boy and girl. The final division of the book, Community Hygiene, is calculated to awaken within the student a social sense in relation to hygiene and can be looked upon as excellent training for future citizenship.

Illustrating the volume are pictures of men who have contributed to medical science and health, views of unhygienic conditions that prevail in home, school, city, country and industry, and of correct methods of lighting, ventilation, posture and other health measures and habits.

WHAT IS SOCIAL CASE WORK?

By Mary E. Richmond, Director of Charity Organization Department, Russell Sage Foundation, New York.[3]

This author of a number of books and papers on scientific and practical phases of social work has in her new volume, "What Is Social Work?" chronicled some of the ordinary yet compelling situations that confront the case worker in her daily rounds. The practical psychology applied in each case makes its publication worth while, although as a series of human interest sketches the book is not without wide interest.

Miss Richmond's style is chatty and informal, and her work would constitute an interesting introduction to social service literature of appeal to the young woman with vocational aspirations in that field. The relation of the social worker to the hospital is but scantily touched upon in this beginner's volume. Some 350 hospitals, according to the author, have social service workers. A tendency to overload these women with administrative duties has delayed progress in this special field, she believes. There is little for the medical social worker to glean from Miss Richmond's book, the work being designedly kindergartenish.

1. W. B. Saunders Company, Philadelphia and London.
2. Henry Holt and Company, New York, 1921.
3. Russell Sage Foundation, 1922.

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